# Anthracite Mining in the Lackawanna Valley in the Nineteenth Century



Coal Mining: Head of Shaft. Post card in the collection of the Carbondale D&H Transportation Museum

## S. Robert Powell, Ph.D.

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741 pages, illustrated

## A History of the

# **Delaware and Hudson Canal Company**

## in 24 Volumes

## S. Robert Powell, Ph.D., 1974 Indiana University, Bloomington, IN

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The Birth and First Maturity of Industrial America

Century

**XXIV** 

## Acknowledgements

The newspapers that were published in Carbondale during the nineteenth century were created by first class writers and editors and are primary historical documents of exceptionally high quality.

The fact that most of the components of that astonishing newspaper legacy from the nineteenth century in Carbondale are still extant is almost beyond belief, but they are, and that is a consequence of the foresight, intelligence, diligence, and perseverance of one man, Dilton Yarington,\* who throughout his long life avidly collected—and had bound volumes created of—all the newspapers in his world.

We are very pleased to express here our thanks and gratitude to the writers and editors of those newspapers and to Dilton Yarington for their splendid and epoch-defining work. Without those newspapers this 24-voulme history of the Delaware and Hudson Canal Company's Gravity Railroad could not be written.

Dilton Yarington was born in Wilkes-Barre, October 8, 1803, the son of Peter and Naomi (Flint) Yarington. On December 23, 1827, Dilton Yarington married Rebecca Lambert of Wyalusing. On April 1<sup>st</sup>, 1847, they moved to Carbondale, where they lived in a house on Highland Avenue, in front of which was a row of forty-two finely formed and healthy white ash trees, one rod apart, that were planted by Dilton Yarington. Those trees were widely regarded as the most beautiful rows of shade trees in Northern Pennsylvania.

Dilton Yarington was a blacksmith and lumberman, who owned and operated a highly successful steam saw mill in Carbondale. He was fond of reporting that during his time in the saw mill business that he sawed about 36,000,000 feet of lumber, and about 20,000,000 feet of lath. His father, Peter Yarington, was also a blacksmith, and it was he who made the first grate ever made to burn successfully anthracite coal. That grate was first used on February 22, 1808, in Judge Fell's residence on Northampton Street in Wilkes-Barre, and Dilton Yarington was present at the time. As a blacksmith, Dilton Yarington engaged in the manufacture of edge tools and agricultural implements, and his axes became famous with the early settlers of the region. He affirmed that it was his strong right arm that fashioned many of the tools which were used in the construction of the D&H Gravity Railroad. As a blacksmith he also once remarked that if all the horses and oxen he had shod in his lifetime stood in a line that they would reach from Wilkes-Barre to San Francisco.

Dilton Yarington was an accomplished and highly successful blacksmith and lumberman, to be sure, but it was his lifelong interest in public affairs and newspapers that interests us most here. As a 9-year old boy, we learn from his obituary that "During the war of 1812 he served as errand boy to one of the army officers who were stationed at Wilkes-Barre and thus at an early age was

led to take a deep interest in public affairs. Every issue of the local paper was read aloud to the men employed in his father's blacksmith shop and the workshop soon became a once-a-week resort for the villagers to hear the blacksmith's boy read the latest war news." (ANOTHER PIONEER GONE. / Dilton Yarrington Passed Away Last Evening—History of a Life That Grew With This Region. Carbondale Leader, November 25, 1890, p. 4)

From a letter to the editor of *The New-York Tribune* that Dilton Yarington wrote in 1888 (letter reprinted in the March 15, 1888 issue, p. 3, of the Carbondale newspaper, *The Journal*) we learn that when Dilton Yarington learned that "a runaway apprentice boy from Vermont, named Horace Greeley" was about to start a newspaper, that he wrote Greeley immediately and subscribed to Horace Greeley's newspaper, a subscription that Dilton Yarington maintained from that day on. Of Horace Greeley's *New-York Tribune*, Yarington said that he considered it "one of the best—if not the very best—paper printed on earth."

In an interview written by "C" that was published in *The Wilkes-Barre Telephone* ("The Canvasser Walking and Writing," February 18, 1888, p. 2), Yarington said to *C:* "Come with me and I will show you all the newspapers every [sic; should be "ever"] published in Dundaff and Carbondale since 1828. I have them all bound, two years together. They make a pile more than six feet high."

That pile more than six feet high of bound volumes of newspapers from Dundaff and Carbondale is the astonishing nineteenth-century newspaper legacy of Carbondale. Those bound volumes, all of which have now been microfilmed, are now in the archives of the Carbondale Historical Society and the Carbondale D&H Transportation Museum.

S. Robert Powell March 29, 2015

\* In *Century of Progress*, p. 58, there is a facsimile of a letter that is signed by Dilton Yarington. Note that in that signature, there is only one "r" in the name "Yarington."

### **Overview**

The industrial revolution in America was born on October 9, 1829, in Carbondale, PA, when the first cut of Delaware & Hudson Gravity Railroad coal cars, loaded with mass produced anthracite coal, headed up Plane No. 1 out of Carbondale for Honesdale and to market in New York City.

Those cars, filled with anthracite coal from mines in Carbondale, traveled over 16 miles of railroad tracks, made up of eight inclined planes and three levels, to Honesdale, where the coal was transferred into canal boats and hauled 108 miles, through the D&H Canal, to the Hudson River.

Most of the coal that was sent through the D&H system in the course of the nineteenth century was shipped south on the Hudson River to the New York metropolitan market and to many ports on the Atlantic seaboard, north and south of New York. A large quantity of anthracite coal was also shipped up the Hudson River to Albany, and shipped through the Erie Canal to the American Midwest.

The mining, manufacturing, and transportation system that became operational on that day between the anthracite mines of the Lackawanna Valley and the retail markets for that coal on the eastern seaboard and in the American Midwest was the product of enlightened entrepreneurial, technological, and managerial thought on the part of the officers, managers, directors, and employees of the Delaware and Hudson Canal Company. That system, the first private sector million-dollar enterprise in American history, was, at the same time, the pioneer expression on this continent of mass production, a mode of production that would thereafter characterize industry in America and around the world.

Mass production, the revolutionary engine that made it possible for the D&H to launch its mining, manufacturing, and transportation system in Carbondale on October 9, 1829, and to perpetuate that system well into the 20<sup>th</sup> century, came into existence when it did and lasted for as long as it did because a body of employees

and managers, within the context of a community, of which both groups were a part, chose to work together for their mutual benefit and enrichment, to mass produce and market a commodity, and in so doing to implement the clearly articulated production and marketing objectives of "the company," the Delaware and Hudson Canal Company.

In this 24-volume work on the D&H,\* we will (1) document the history of that mining, manufacturing, and transportation system, with a special focus on the rail lines of the Delaware and Hudson Canal Company in northeastern Pennsylvania, from the opening of the D&H Gravity Railroad in 1829 to the anthracite coal strike of 1902; and (2) demonstrate that the history of that mining, manufacturing, and transportation system, the D. & H. C. Co., from 1829 to 1902, is, at the same time, not only an illustration of eight decades of fine tuning by the D&H of their mass production procedures and techniques but also a full-bodied expression and record, both from the point of view of the D&H and from the point of view of its employees, of the birth, development, and first maturity of the industrial revolution in America.

This is a success story, directed by America's pioneer urban capitalists, and implemented by them and the tens of thousands of men, women, and children who emigrated from Europe to the coal fields of northeastern Pennsylvania in the nineteenth century to work for and with the D&H and to start their lives over again. This is a success story that is important not only within in the context of local, state, and regional history but also within the context of American history. It is a compelling story.

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<sup>\*</sup>The present volume focuses on *Anthracite Mining in the Lackawanna Valley in the Nineteenth Century*. Each of these 24 volumes will focus on one aspect of the history of the Delaware and Hudson railroad, from the opening of the Gravity Railroad in 1829 to the anthracite coal strike of 1902. Each volume will be an autonomous entity and published separately.

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1701

#### **Anthracite Coal in Northeastern Pennsylvania**

The proprietary government of Pennsylvania (the Susquehanna Company of Connecticut) purchased from the Indians of the Six Nations, at Fort Stanwix in the Province of New York, on July 11, 1754, for 2,000 pounds New York currency, equal to \$10,000 in silver, a section of land about 125 miles long and 35 miles wide. Practically all of the anthracite coal fields of northeastern Pennsylvania—and three-fourths of the earth's anthracite coal deposits—are located in this 484-square-mile tract of land, which was divided geographically into four distinct, canoe-shaped coal fields, all having their greatest length in a northeasterly to southwesterly direction.

This anthracite coal was formed more than 250 million years ago during the Pennsylvania period of the Paleozoic era. These coal beds or veins were folded and faulted by the geological formation of the Appalachian Mountains. The intense pressures associated with that process produced the high carbon content that characterizes anthracite. (Anthracite is nearly pure carbon, generally averaging 86 percent.)

Those four coal fields, or basins, are the Northern Field (176 square miles; Wyoming and Lackawanna Counties, with vestiges in Susquehanna and Wayne), Eastern Middle Field (33 square miles; primarily Luzerne County; Hazleton is the field's principal city), Western Middle Field (94 square miles; Northumberland, Columbia, and Schuylkill counties; Shamokin, Shenandoah, and Mahanoy City are the principal cities), and Southern Field (181 square miles; primarily in Schuylkill and Carbon counties; Pottsville, Tamaqua, and Jim Thorpe are the principal cities).

The Northern, Western Middle, and Southern Fields occupy valleys or basins; the Eastern Middle Field occupies a plateau-like tableland. Although separated from each other, these four fields are adjacent to each other and are located in Wayne, Susquehanna, Lackawanna, Luzerne, Carbon, Schuylkill, Columbia, Northumberland, and Dauphin counties.

These fields are divided into three regions: the Wyoming, Lehigh, and Schuylkill. The Wyoming region comprises the Northern Field. The Lehigh region comprises the Eastern Middle Field. The Schuylkill region includes the Western Middle and Southern Fields.

The beds of the Northern, or Wyoming, Field are comparatively flat/horizontal, until they pitch upward at the outcrops on the mountain sides that rim the valley, while the Eastern Middle and Western Middle Fields contain both flat and very steeply pitching beds, the latter being heavily faulted, which makes mining not only difficult but also hazardous. In the Southern, or Schuylkill, Field the coal beds lie almost entirely in very deep basins and at steeply pitching angles.

Where the veins intersect the surface they can be mined without expensive equipment or any

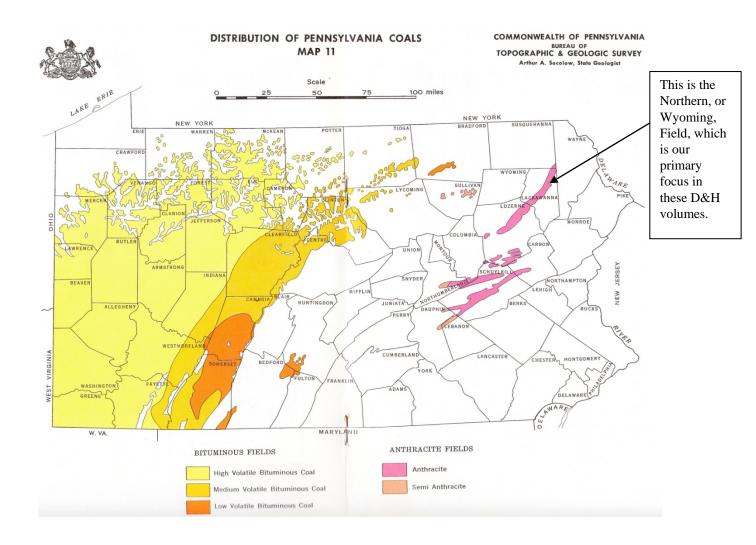
technical knowledge of mining principles. However, where the steeply pitched veins descended beneath the surface, frequently extending beneath the water table, underground mining, with its inherent uncertainties and dangers, was required. It was often difficult to follow the folded and faulted veins below the surface.

The Lackawanna and the Wyoming Valleys constitute the entire northern anthracite coal field, which begins in Forest City and extends to Nanticoke. The upper part of the valley took its name from the Lackawanna River, which flows through the land from above Carbondale and down to Pittston, where it enters the Susquehanna River. The Wyoming Valley is the area through which the Susquehanna River flows from Pittston to Nanticoke.

The Northern, or Wyoming, Field, containing the deepest anthracite deposits, having the highest carbon content, is described in *The Story of Anthracite* (Hudson Coal Company, 1932, p. 14) as follows:

"This field extends from Forest City [on the Lackawanna River] on the east to Shickshinny [on the Susquehanna River] on the west, a distance of about fifty-five miles. It is a crescent-shaped basin, reaching at Wilkes-Barre a maximum breadth of about six miles and having a total area of about 176 square miles. The westerly cusp of the crescent lies just north of the Eastern Middle Field and extends in a northeasterly direction through Luzerne and Lackawanna counties, just dipping into Wayne and Susquehanna counties at the other extremity of the crescent. The principal cities in this field are Carbondale, Scranton, Wilkes-Barre, Pittston, and Nanticoke."

In the Edmunds and Koppe book, following page 14, is the following map showing the distribution of Pennsylvania coals:



On page 16 of Final Report January, 2002 Chapter 7 2 – Description of the Watershed, Chapter 2, Description of the Upper Lackawanna Watershed, Physical Setting of the Upper Lackawanna Watershed, we read the following about the Northern Anthracite field:

"Up to eight coal beds were once mined at the north end of the Northern Anthracite field, the number of exploited beds increasing southward from Forest City toward Carbondale. Forest City is at the northern tip of the anthracite coalfields. Just a mile north of Forest City there is no evidence of mining. All of the mined coal was high-rank anthracite, relatively low in sulfur and having heat values of up to about 15,000 BTU/lb. The coal was formed in swamps during the so-called Carboniferous Period when large quantities of vegetation fell into swamps and accumulated as thick masses of woody and leafy debris, or peat, the first stage in the formation of coal. Heat and pressure caused by the weight of a thickening pile of overlying sediments

compacted the peat and forced out some of the more easily vaporized compounds. This process concentrated the carbon and eventually turned the peat into lignite, then bituminous coal, and finally anthracite. In this region, where pressures were greatest, anthracite coal is found. A cycle of peat formation and burial was responsible for multiple seams of coal."

The existence of anthracite coal in northeastern Pennsylvania was noted at the end of the eighteenth century. William H. Williams, D&H Vice President and a Manager of the D&H from 1912—and up to 1923, at least, and perhaps longer—in his remarks, titled "Anthracite Development and Railway Progress," at the D&H Centennial Luncheon at the Hotel Casey in Scranton on April 24, 1923, noted:

"The existence of anthracite at Carbondale became known in 1799. These discoveries received little attention and few among those to whom they became known suspected their significance. The region was remote, rugged, inaccessible and wild. Roads were few and so poor, where they existed at all, that they would now be regarded as impassable. Its rivers were torrential and were not navigable except after costly improvements." (*COP*, p. 567)

A very good account of (1) the vast extent of these anthracite deposits in northeastern Pennsylvania and (2) early uses of coal and of initiatives to market anthracite is presented in an article that was published in the *Carbondale Advance* of June 5, 1875, titled "The Anthracite Coal Region." Here is that article:

"The Anthracite Coal Region. / The anthracite coal of Eastern Pennsylvania was first discovered, it is said, in 1770. In 1775, just a century since, says a writer, a boat-load was taken down to the armory at Carlisle, and in 1791 the great open quarry of fuel near Mauch Chunk was made known. From the unlikeness to the Virginia coal, and the difficulty of igniting it, the Pennsylvania anthracite encountered much opposition. Tradition tells us that a boat-load taken to Philadelphia in 1803 was broken up and used to mend the roads. But it slowly found its way into use; and from a pamphlet published in 1815, we learn that the coal from the Lehigh had been compared with the Virginia bituminous coal, and, by tillers and others, was to be preferred to it for durability and economy. Oliver Evans had, moreover, at this time tried the anthracite with success under the boilers of his steam engine and also insisted upon its advantages for domestic purposes. Notwithstanding these results, the new fuel found its way very slowly into use, and in 1822 the total production of the anthracite mines was estimated at 3,720 tons, against 48,000 tons of the coal from Richmond, Virginia, then its only rival. Fifty years later or in 1872, the official returns give for the exportation of coal from the anthracite region not less than 19,000,000 tons, besides about 2,500,000 tons for local consumption, while that of the Virginia coal field for the same year is estimated at 62,000 tons. The late Professor Silliman, who visited the anthracite

region in 1825, and published his report of it in the following year, was the first to appreciate the real value and importance of this deposit of fossil fuel, which he then spoke of as a great national trust. / The small detached basins of the anthracite region have together an area of only four hundred and seventy two miles; but the immense aggregate thickness of the seams of coal, varying in different parts from fifty to one hundred feet and estimated at an average of seventy-two feet for the whole, makes this wonderful region of greater value than Western coal fields, whose extent is measured by many thousands of square miles. Mr. P. W. Shaeffer, who has calculated the cubic contents of these anthracite beds, estimates it to have been at the time when mining was commenced equal to 26,361,070,000 tons, from which one-half may be deducted for waste in mining and breaking for market, and of losses from faults and irregularities in the beds, giving of merchantable coal 13,180,538,000 tons. If from this we subtract the amount produced by the mines from 1820 to 1870, estimated at 296,666,325 tons, we had still in store at the latter date a supply of 25,000,000 tons a year, or more than the present rate of consumption, for five hundred and twenty-five years." (Carbondale Advance, June 5, 1875, p. 4)

In the above account of the early uses of anthracite coal in Pennsylvania, we read the following statement about Oliver Evans, of Philadelphia:

"Oliver Evans had, moreover, at this time tried the anthracite with success under the boilers of his steam engine and also insisted upon its advantages for domestic purposes. Notwithstanding these results, the new fuel found its way very slowly into use..."

Let's take a closer look at Oliver Evans.

One can not overstate the importance of Oliver Evans, the inventor of the high-pressure steam engine, in the history of technology in America. In *Everyday Things in American Life 1776-1876* by William Chauncy Langdon (New York. 1941), we read the following about Oliver Evans:

"It [the steam engine] came from England. / To the notable group of English pioneers we may add the name of an American, Oliver Evans of Philadelphia (1755-1819). He was a versatile inventor, making a number of improvements in flour-mill machinery and in 'steam carriages.' He is best known for his steam dredge, to which he gave the name of the Orukter Amphibolos or Amphibious Digger. . . As the first steam-engine builder in America, Oliver Evans and his Orukter Amphibolos had a curious significance. With steam, water transportation was just taking land transportation into partnership. A description of the machine and of its introduction to the public is given in Oliver Evans's own words: / 'In 1804 I constructed at my works, a mile and a half from the water, by order of the Board of Health of the City of Philadelphia, a machine for cleaning docks. It consisted of a large flat or lighter with steam engine of the power of five horses on board to work machinery to raise the mud into lighters. This was a fine opportunity to show the public that my engine could propel both land and water carriages, and I resolved to do

it. When the work was finished I put wheels under it, and though it was equal in weight to two hundred barrels of flour, and the wheels were fixed on wooden axle-trees for the temporary purpose in a very rough manner, and attended with great friction of course, yet with this small engine I transported my great burden on the Schuylkill with ease; and when it was launched into the water I fixed a paddle wheel at the stern, and drove it down the Schuylkill to the Delaware, and up the Delaware to the city; leaving all the vessels going up at least half way, the wind being ahead.' / This exhibition occurred on or about July 13, 1805. Oliver Evans also put an advertisement in the newspapers, providing for the defraying of the expenses of the exhibition; it read in part as follows: 'The above machine is now to be seen moving around the Centre Square at the expense of the workmen, who expect 25 cents from every generous person who may come to see its operation; but all are invited to come and view it, as well those who cannot as those who can conveniently spare the money.' / At first the persistent though desultory efforts to find ways to put the power of steam to practical use were not well differentiated. This was natural, indeed inevitable. But by 1810 or 1815 steam engineering had clarified into three distinct lines, aimed at three different purposes / 1. The operation of manufacturing machinery; / 2. The propulsion of water traffic, whether passenger or cargo, in boats; / 3. The operation of land traffic, both passenger and freight, in trains on rail-roads. / These purposes defined three different types of engine as necessary for the work to be done—stationary engines, naval engines, and locomotives. . . " (pp. 336-338)

Lackawanna County Welsh scholar and historian, Jerry Williams, said the following of Oliver Evans in *Y Doraig Goch*, St. David's Society of Lackawanna County, Volume 1, Issue 1, December 2007, p. 3:

"My discovery of Oliver Evans occurred while tracing the roots of NEPA industrial development. I found the man who laid the foundation for the future of NEPA and America. / It was during the building of a flour mill with his brothers that he had an idea to build a mill that would process flour from beginning to end without human involvement, save for starting and stopping and machine adjustments. This was a milestone for milling and a pattern that would be copied by the world's manufacturers. By 1792, George Washington's mill was one of over 100 that were using Evans' process, and the standard for modern manufacturing was established. Evans published *The Young Mill-wright and Miller's Guide*, which became a worldwide reference. His next venture was harnessing the direct and powerful force of high-pressure steam in a reciprocating engine that would become the heart of riverboats, powered factories and locomotives. Evans envisioned a double-tracked railway system in 1813 and provided a description. Other technological gifts from Evans included a solar boiler, gas light system, a continuous baking oven and a means of raising sunken ships. Oliver Evans was well ahead of his time." (Y Doraig Goch, St. David's Society of Lackawanna County, Volume 1, Issue 1, December 2007, p. 3)

In *Century of Progress* we read the following about Oliver Evans:

"In America, as early as 1780, Oliver Evans seems to have matured his plan of an high pressure engine and applied it to mechanical work, but as a stationary engine only. In 1787, or perhaps a little later, Evans received a patent for the exclusive use of his 'improvements in flour mills and steam carriages.' In 1804 Evans propelled a wheeled scow, driven by the power of steam, up Market street, in Philadelphia, and around the circle to the Water Works. It is obvious that this contrivance, in principle of steam propulsion by means of engine and wheels, was closely akin to the first Stephenson locomotives that were run on tracks in England. There is, however no record that Evans ever put his wagon or scow upon a track. The steam railroad locomotive remained in an embryonic stage until 1814 when Stephenson put his first locomotive, named *My Lord*, to work upon the Killingworth Mine railroad near Newcastle." (*COP*, pp. 6-7):



Oliver Evans, 09-13-1755—04 15-1819, Inventor/Engineer

Here is the caption on the engraving shown above of Oliver Evans that is published on page 8 of Eugene S. Ferguson's *Oliver Evans Inventive Genius of the American Industrial Revolution*, 1980:

The earliest surviving picture of Oliver Evans appears in Henry Howe's book, *Memoirs of the Most Eminent American Mechanics*, published in 1844 (immediately above). It was an engraving probably copied from a portrait painted by Bass Otis. Otis had been commissioned by Joseph Delaplaine in 1813 to paint a series of portraits, which were to be published as engravings in Delaplaine's abortive series, "Portraits of Eminent Men and Women." The engravings were not made at that time because Delaplaine found insufficient encouragement to publish his series, but he did display the painted portraits for a time in a gallery of his own. After Delaplaine's death in 1824, the paintings were sold to Rubens Peale, who in turn sold them to P. T. Barnum for display in the latter's museum in New York. Presumably, the portrait of Evans was destroyed in the Barnum museum fire of 1863. (See Roland H. Woodward, *et al.*, *Bass Otis*, *Painter*, *Portraitist and Engraver* [Wilmington: Historical Society of Delaware, 1976], pp. 14–17.)

Consider the following highly innovative machines and enterprises developed by Oliver Evans (who was born in 1755):

--In 1784, at the age of 29, he created the first integrated production line (using five machines he created a production line in which all movement throughout a flower mill was automatic; power was supplied by water wheel; grain was fed in at one end, passed by a system of conveyors and chutes through the stages of milling and refining, and emerged at the other end as finished flour). His *Young Mill-wright and Miller's Guide In Five Parts*, which he wrote about his automated mill in 1792, went through 15 editions by 1860. The book was sold by the author, by Robert Campbell, and Matthew Carey, Booksellers in Philadelphia; subscribers to the first edition included George Washington, U. S. President; Edmund Randolph, Secretary of State; Thomas Jefferson, former Secretary of State; 8 U. S. senators, including Robert Morris of Pennsylvania; 54 U. S. Congressmen, including James Madison; 5 Pennsylvania senators, and 14 Pennsylvania state representatives.

--Evans was the first to realize the vast possibilities of double-acting high pressure steam (over 30 pounds per square inch; Evans' engines could produce 150 pounds per square inch) and pioneered the development of the high-pressure steam engine (U.S. patent, 1790. (Fulton's steamboat: 8 pounds of low-pressure steam; could travel at 6 mph; Evans's high-pressure steam engines could produce 150 pounds of steam pressure and move boats at 9 mph). Oliver Evans sent the plans and specifications for his steam engine to England in 1794-95 via Joseph Stacy Simpson of Boston, with the hope that some British engineer would approve and conjointly with him take out a patent for the invention. Evans' plans were extensively exhibited. Simpson died in England. Richard Trevithick and his cousin Andrew Vivian then took out a patent for a high

pressure steam engine with a cylindrical flue boiler (which had been invented by Oliver Evans and which was unknown in Great Britain at the time)—proving two points: (1) that Oliver Evans was the inventor of the high-pressure steam engine, and (2) that they (Trevithick and Vivian) had stolen Evans' plans for a double acting high-pressure steam engine. (Trevithick and Vivian are regarded, erroneously, by many as the inventors of the high-pressure steam engine; see *Scientific American* Supplement, Vol. XXIV, No. 620, November 18, 1997: "Oliver Evans and the Steam Engine"

- --In 1801, he built in Philadelphia a stationary engine that turned a rotary crusher to produce pulverized limestone for agricultural purposes.
- --In 1803, visitors to the Philadelphia workshop of Oliver Evans saw a steam-powered engine that could drive 12 saws through a hundred feet of marble in 12 hours.
- --Completed by June 1805, his new type of steam-engine scow, called the Orukter Amphibolos, or Amphibious Digger, was 30 feet (9 m) long by 12 feet (3.7 m) wide. This steam dredge was used for cleaning and deepening the docks of the city of Philadelphia. In its machinery it embodied the chain-of-buckets principle of his automatic flour mill. Equipped with wheels, it ran on land as well as on water, making it the first powered road vehicle to operate in the United States. Driven by the power of steam, Evans drove his Amphibious Digger up Market Street, in Philadelphia, and around the circle to the Water Works.
- --In 1806, Evans began to develop his noted Mars Iron Works, where, over the next 10 years, he made more than 100 steam engines that were used with screw presses for processing cotton, tobacco, and paper.
- --On April 7, 1806, Oliver Evans successfully melted iron with Lehigh, or anthracite, coal. In *Bathe and Bathe*, pp. 122-123, we read:

We, the subscribers, do certify that we were present on the seventh day of April 1806 and seen Oliver Evans try an experiment to melt iron with Lehi coal which are of a hard quality and very difficult to kindle but when kindled by burning a little wood or other coal until ignited produced an intense heat and continues to burn if a strong blast be applied. The said Evans represented to us that he meant to discover whether these coals would answer instead of the coaks commonly used in Cupolo furnaces urged by the blast of Bellows and thereby to discover means of saving the expense of coaking or charing coals for the purpose of melting iron in cupolos. And that he conceived that the Lehi coals having no sulpher in them would not injure nor waste the iron so much as sulphurious coals and would make softer castings. We seen him melt in a furnace peculiarly constructed and by using Lehi coals a small quantity of iron that had been twice or thrice cast before that time and it

melted in about fifteen minutes from which a wing gudgeon was cast and it was so soft as to be easily filed or drilled. The said Evans represented to us that he deemed his discovery a great and important one and would tend to lessen the expense of casting iron and that he intended to take out a patent for it after he could get it into compleat operation.

Witness Our Hands

I certify that I was present at trying the above experiment. I assisted to blow the bellows. I seen the gudgeon cast and observed several try the iron with a file and tried it myself and we agreed that it was uncommonly soft cast iron. Jona. Coffee Charles Taylor Jonathan Thomas Pete Evans

Where did Oliver Evans get his Lehigh coal for this experiment? In *Bathe and Bathe*, p. 123, re read:

It is interesting to know something about this early anthracite, or "stone coal" as it was generally called at this period. The following information was obtained from Sherman Day's Historical Collections of the State of Pennsylvania, published in 1843.

The coal on the Lehigh river 96 miles by land from Philadelphia, was accidentally discovered in the year 1791 by a hunter named Philip Ginter, who observed it adhering to the roots of a tree which had been blown down, it occured to him that this, perhaps, might be a portion of that "stone-coal" of which he had heard. The next day he showed some of it to Col Jacob Weiss at Fort Allen, and the Colonel who was alive to the subject brought the specimen to Philadelphia, and showed it to John Nicholson Esq, Michael Hillegrass, [Hillegas] and Charles Cist, a company was formed by Hillegrass, Cist, Weiss, and others in 1792 called the Lehigh Coal Mine Company, and took up some 8 to 10,000 acres. Little however was done with it until the year 1806 when William Turnbull Esq, had an ark constructed at Lausanne, which brought down two or three hundred bushels to Philadelphia. This was sold to the Manager of the Water Works for use of the boiler of the Center Square steam engine. It was there tried as an experiment; but ultimately rejected as unmanageble, as it only served to put the fire out so the remainder was broken up and spread on the walks in place of gravel.

Obtaining some of this coal, Oliver Evans conducted the before mentioned experiment before witnesses, as to its possibilities for use in smelting in place of coke or charcoal.

--In May 1809, at the age of 54, in the presence of his family, Evans destroyed all his papers and drawings. "This culmination was caused by the remarks of the presiding judge of the District Court in Philadelphia in effect that a patentee was a violator of the public rights. This judge was Bushrod Washington then sitting in Judge Richard Peter's court in Philadelphia." (Bathe and Bathe, p. 157)

--In 1811, he opened a factory to build steam engines in Pittsburgh; he designed steam engines, that burned anthracite coal, suited to every purpose for which power was wanted: to drive mill stones, to saw lumber, to pump water, to propel a boat, to drive land carriages, to raise coals and water out of the mines.

--In October 1813, Evans published a book that he wrote under the pseudonym of Patrick N. I. Elisha, Esq., Poet Laureate. The book was a satire on the insurgent milling fraternity. The book had stiff cardboard covers of pale salmon color and it contained 189 pages of verse, foot-notes, and excerpts of the patent laws. In this book he included a prophecy for the future of railroads, which is given in *Bathe and Bathe* on page 200. Here is that prophecy:

#### PROPHECY BY THE POET.

The time will come when people will travel in stages moved by steam engines, from one city to another, almost as fast as birds fly, fifteen or twenty miles in an hour.

Passing through the air with such velocity, changing the scene in such rapid succession, will be most exhilerating, delightful exercise.

A carriage will set out from Washington in the morning, the passengers will breakfast at

Baltimore, dine at Philadelphia, and sup at New York, the same day.

To accomplish this, two sets of railways will be laid so nearly level as not in any place to deviate more than two degrees from a horizontal line, made of wood or iron or paths of broken stone or gravel, with a rail to guide the carriage, so that they may pass each other in different directions and travel by night as well as by day; and the passengers will sleep in these stages as comfortably as they now do in stage boats . . .

And it shall come to pass, that the memory of those sordid and wicked wretches who opposed such improvements, will be execrated, by every good man, as they ought to be now.

--Evans died on April 15, 1819, age 64. Body first interred in Zion Church yard in lower Manhattan; body later moved to Murray Hill, and the moved to Trinity Cemetery (Plot 641), Broadway and 157<sup>th</sup> Street.

The high pressure steam engines developed by Oliver Evans are of special interest to us in this history of the Delaware and Hudson Canal Company. The question must be asked: Why did the D&H look to England, in 1828, and not Philadelphia (Oliver Evans) for the three high-pressure steam locomotives (Stourbridge Lion and two others) that it planned, originally, to use on its Gravity Railroad?

Among the many enterprises/companies established by Evans in Philadelphia, some of which survived him, there was not a locomotive works there that could have supplied the D&H with the locomotives (in which were installed double acting high-pressure steam engines) that the company originally planned to use on the three levels in the 1829 configuration of the Gravity Railroad. Such locomotives (based on Oliver Evans' plans and models) were, however, being produced and were available for sale in England. One the objectives of Horatio Allen's trip to England in 1828 was to buy three of them for the D&H.

(end of Oliver Evans excursus)

Similarly, an excellent description of the anthracite deposits in northeastern Pennsylvania and of the early efforts to burn anthracite is given in *Susquehanna*, *River of Dreams* by Susan Q. Stranahan (The John Hopkins University Press, 1993), pp. 150-151. Some of the remarkable facts presented by Stranahan are the following:

- More than 100 billion tons of coal were once buried beneath Pennsylvania, with 80 billion tons still there.
- The world's largest deposits of anthracite, or hard, coal are found in a 500-square mile area of northeastern Pennsylvania.
- The Northern Field is a canoe-shaped trough of coal that begins in Forest City in Susquehanna County and extends fifty-five miles southwest to Shickshinny in Luzerne County, following the Wyoming Valley most of the way. Consisting of eighteen workable seams that reach down 2,100 feet or more, the Northern Field, like the others in Pennsylvania, still contains huge quantities of recoverable coal—as much as 7.3 billion tons
- 1917 was the peak year of anthracite production in Pennsylvania, with 156,148 men working in the mines.
- By the turn of the twentieth century it was possible to walk the twelve miles from Pittston to Nanticoke and never leave the underground maze of coal tunnels and shafts.
- The coal industry in the Lackawanna and Wyoming Valleys was born in 1808 when the Wilkes-Barre tavernkeeper Jesse Fell stacked some coal in an iron grate. The coal burned briskly, and the coal industry of the Wyoming Valley was born.

#### In Stranahan, pp. 150-151, we read:

"More than 100 billion tons of coal were once buried beneath Pennsylvania, and historically the state has produced far more coal than any other—nearly one fourth of that mined in the entire United States. Almost 80 billion tons still remain in the ground, three-fourths of which is soft, or bituminous coal. That is located exclusively in the western half of the state, with much of it concentrated in the drainage basin of the West Branch of the Susquehanna. The world's largest deposits of anthracite, or hard, coal are found in a 500-square mile area of northeastern Pennsylvania [emphasis added]. / The coal is the end product of the extraordinary pressure applied by the earth's changing crust to the swamps that existed over 300 million years ago. As the land folded into the ridges that stretch from northeast to southwest, beds of coal were formed—some hard, some soft, depending on the pressures exerted. The anthracite lies in separate fields—the Northern Field which underlies the Wyoming Valley; the Western and Eastern Middle fields, drained by the North Branch [of the Susquehanna River] before it reaches Northumberland; and the Southern Field, drained in part by Swatara Creek, which empties into the Susquehanna at Middletown, south of Harrisburg. / The Northern Field is a canoe-shaped trough of coal that begins in Forest City in Susquehanna County and extends fifty-five miles southwest to Shickshinny in Luzerne County, following the Wyoming Valley most of the way.

Consisting of eighteen workable seams that reach down 2,100 feet or more, the Northern Field, like the others in Pennsylvania, still contains huge quantities of recoverable coal—as much as 7.3 billion tons. / In 1917, the peak year of anthracite production in Pennsylvania, 156,148 men descended into the bowels of the earth to blast and chisel away vast caverns in the glistening anthracite, bringing to the surface more than 100 million tons of coal. So exhaustively did the miners work beneath the Wyoming Valley that by the turn of the century it was possible to walk the twelve miles from Pittston to Nanticoke and never leave the underground maze of tunnels and shafts. / While Indians presumably experimented to find a use for the black rocks jutting from the steep hills or lying in the streambeds of the Susquehanna, the U. S. Geological Survey attributed the discovery of coal to some Yankees from Connecticut who in 1762 had settled in the Wyoming Valley. Wilkes-Barre blacksmith Obadiah Gore was using it by 1769, and during the Revolution, coal was shipped down the Susquehanna in arks, transferred to wagons, and hauled to the armory at Carlisle to fuel the forges there. / The hard coal produced tremendous heat and little ash, but it had a major disadvantage: it would not burn without a constant flow of oxygen. That rendered it of little value to the average user, as one businessman discovered in 1807. Abijah Smith's grand scheme\* to mine coal from the seventy-five acres he owned in Plymouth and ship it downriver to Columbia collapsed when he could attract no customers. For the first time, but definitely not the last, coal was dumped along the banks of the Susquehanna. The following year, Wilkes-Barre tavernkeeper Jesse Fell stacked some of the coal in an iron grate. It burned briskly, his inn became a landmark, and the coal industry of the Wyoming Valley was born." (pp. 150-151)

\*More on Abijah Smith: Published in the November 18, 1871 issue of the *Carbondale Advance*, p. 2, is the following article: "The Anthracite Coal Fields. / We copy the following interesting description of the Luzerne Coal Region from the correspondence of Forney's *Press:* / . . . The anthracite coal trade of Pennsylvania is commonly said to have begun at Mauch Chunk in 1820. This is a mistake. In the year 1807 Abijah Smith, of Plymouth, a township below here on the opposite side of the river, purchased an 'ark,' commonly used for the transportation of plaster, loaded it with fifty tons of coal, and later in the season floated it down to Columbia, in Lancaster Co. This was probably the first cargo of anthracite coal that was ever offered for sale in this or any other country. . . During the year 1813 Mr. Abijah Smith and his brother sold through their agents in New York \$2,691.20 worth of coal. It was sold by the chaldron, containing about thirty-six bushels, being retailed at twenty-five dollars per chaldron. . . Anna." (*Carbondale Advance*, November 18, 1871, p. 2)

The anthracite industry in the Lackawanna County was at one time a \$500,000,000 a year industry. Between 1930 and 1945, 25,000 mining jobs were lost here. In 1930 there were 36,317 employed in the anthracite industry in Lackawanna County; in 1945, 11,400. In 1952, there were 9,717 employed in the industry, a loss of 26,600 jobs in 22 years.

Lackawanna County anthracite production figures: 1930: 15,312,853 tons; 1945, 8,083,021 tons; 1952, 5,303,545 tons.

To mine and market the anthracite coal in its holdings in the Northern, or Wyoming, Coal Field, the Delaware and Hudson Canal Company was brought into existence.

1702

#### Early Uses of Coal and Market Development

In any discussion of the successful burning of coal as a domestic fuel, it must be remembered that the Chinese, in the pre-Christian era, used coal as a fuel. In Will Durant's *Our Oriental Heritage* (New York, 1954), p. 781, we read: "They [the Chinese] were among the first to use coal for fuel, and mined it in small quantities as early as 122 B.C.; but they developed no mechanisms to ease the slavery of mining, and left for the most part unexplored the mineral resources of their soil."

Before we look at the first uses of coal in northeastern Pennsylvania in the late-eighteenth and early-nineteenth centuries in Pennsylvania, it is important to remember that these Pennsylvania initiatives were not the first uses of coal in America. In the fourteenth century, on the Colorado Plateau, Native Americans (Anasazi) there were burning coal to fire their pottery. Using coal resulted in a technological shift that took them (Anasazi) from red wares and black-on-whites to yellow wares.

In the article "On the Trail of the Ancestors" by Craig Childs (*Natural History*, March 2007, pp. 58-63) Mike Yeatts, an archaeologist employed by the Hopi tribe, points out that coal affects not only oxidation during firing but also how long a high temperature can be maintained during firing: "Wood-burning reaches the peak just as the fuel is about to collapse," Yeatts noted, "and after you've lost your main flame. Coal holds its shape so you can get that heat and keep air going into it for a much longer time. That is what gives you this wonderful [yellow] color. Potters were probably using the same clay as that used for white wares, but it's the technique that is different."

Closer to home, in northeastern Pennsylvania, in 1769, Obadiah Gore, a Yankee blacksmith of Wilkes-Barre first successfully burned anthracite in his forge, and following this then outstanding demonstration of the burning qualities of anthracite, it came into general use by the blacksmiths in the Wyoming Valley.

That blacksmiths were among the first to use successfully anthracite coal was underlined by Hollister in his unpublished manuscript in 1880 as follows:

"Five and seventy years ago, if we may judge by conceded facts, blacksmiths took steps far in advance of others towards schooling the yeomanry of the country into the practical use and character of stone coal as a fuel as a substitute for wood and bark hitherto long used all over the country by everybody." (*Hollister*, unpublished typescript, 1880, p. 7)

At the beginning of the 19th century, wood, and not coal, served as the primary industrial and household fuel throughout the United States.

The first recorded industrial use of coal in Pennsylvania was in 1776 at the government arsenal at Carlisle, PA, in aid of the manufacture of arms for the Revolutionary War soldiers. In *Century of Progress*, we read:

"It [anthracite coal] actually had been used at the Government arsenal at Carlisle, in aid of the manufacture of arms for Revolutionary soldiers, for in 1776, two Durham boats which had been sent to Wyoming were loaded with coal at Mill Creek, a few miles below the mouth of the Lackawanna river, and floated down the Susquehanna to Harrisburg, where the coal was unloaded and conveyed in wagons to the arsenal. This is the first recorded shipment and the first known industrial use." (COP, pp. 567-568)

In 1788 occurred the first really industrial use of anthracite, when Judge Jesse Fell of Wilkes-Barre employed it in the manufacture of nails.

In 1800, Oliver Evans of Philadelphia reportedly burned hard coal in an open grate without an artificial draft.

In 1808, William Morris hauled a wagonload of anthracite coal to Philadelphia. He was unable to sell the coal, primarily because the proper method of burning anthracite coal was now known there. Anthracite coal, it should be noted, is practically impossible to ignite in the open fireplaces, which were the rule in the early 19th century. A continuous draft of <u>heated</u> air across the coal is required to make it burn.

The breakthrough development in burning anthracite coal occurred in Wilkes-Barre on February 11, 1808, when Judge Jesse Fell, a tavern keeper in Wilkes-Barre, devised a modified fireplace grate that made it possible to burn anthracite in a common household fireplace (an open grate) without the aid of a forced draft. This marked the first use of anthracite for domestic heating. Not only did anthracite make a cleaner and a better fire than wood, but it was also less expensive than wood as a fuel.

In the November 18, 1871 issue of the *Carbondale Advance*, p. 2, we read the following about Jesse Fell's pioneering work with anthracite coal:

"The Anthracite Coal Fields. / We copy the following interesting description of the Luzerne Coal Region from the correspondence of Forney's Press: / . . . The important discovery of burning coal without an air blast was made by Hon. Jesse Fell, of Wilkes-Barre, on the 11th of February, 1808. In the old Fell Tavern, at the corner of Northampton and Washington streets, I saw the grate which Judge Fell made and used on that occasion. It is a curious relic of the past. . . Anna." (Carbondale Advance, November 18, 1871, p. 2)]

Also in February 1808 in Wilkes-Barre: Peter Yarrington, a blacksmith, used anthracite coal to heat the old Town Hall in Wilkes-Barre on February 22, 1808. In the *Carbondale Leader* of June 29, 1878, p. 3, we read:

"Anthracite Coal. / HOW IT WAS FIRST USED AS A FUEL. / Seventy years ago [1808], on the 22d day of February, Washington's birthday, one Peter Yarrington, an enterprising blacksmith, exhibited a contrivance, of his own invention and manufacture, and after many experiments and repeated failures, he had at last perfected for the purpose of using anthracite as a fuel. The old Town Hall at Wilkes-Barre was thronged on that day with the curious and the skeptical, who has assembled to witness Yarrington's experiment of burning the black stones, as they were then called, and which abounded in that vicinity, and all departed satisfied that the experiment was not only a success, but that fabulous and untold wealth was hidden in the hills and valleys of the surrounding country. / As early as 1800 the inhabitants of the anthracite region endeavored to use the coal which they piled on the wood in the fireplace, as stoves being of modern invention were unknown, and as long as the wood was retained in position the coal would burn brightly, but as soon as the wood fell down the coal would blacken and expire. At a later date some put iron bars cross the and-irons and built a fire thereon with both wood and coal. This was a decided improvement, and the coal was used in that manner for a number of years. Yarrington's experiments, however, resulted in the use of the grate, the form of which remains and is used both in fire-places and stoves to this day, with but little change from his original invention. Mr. Yarrington is now dead, but he is remembered by many living in Port Jervis and by hundreds in the coal region One of his sons, who is now a resident of Lockport, N. Y., married some years ago the daughter of Mr. J. W. Decker, of Port Jervis.—Port Jervis Daily Union. / The Peter Yarrington, mentioned in the above sketch was the father of Dilton Yarrington Esq., so long known and so much respected in our community. The son mentioned as residing at Lockport, N. Y., is a grandson of Peter, Mr. W. L. Yarrington, one of our enterprising merchants. The reminiscence contained in the foregoing article is just now very interesting, and we are assured is a faithful statement of the facts as they occurred at the time. What a wonderful progress has been made in the production and consumption of coal in the time which has elapsed since this rude experiment was made! (Carbondale Leader, June 29, 1878, p. 3)

Anthracite did not burn well in fireboxes designed for use with bituminous or wood because anthracite's characteristic short flame made it difficult to distribute the fire's heat over a large area. Additionally, cold air drafts, a common practice of the period, only extinguished the anthracite fire.

It is important to know how to burn coal. Published in the February 2, 1852 issue of the *Lackawanna Citizen*, for all to read, is the following article titled "How to Burn Coal":

"How to Burn Coal. / The art of burning coal is not properly understood as it ought to be. Too much coal is usually placed in the stove, by which the draught is destroyed and the gases are imperfectly consumed. The Miner's Journal, of Pottsville, says there are two errors in the way we burn coal, by which more than one half is wasted. 1st. We have to shut the door of our stove or furnace to make a temporary over combustion at one time, and at another time we have to leave open the door and let in cold air to cool off. 2. The gas that ascends our chimneys carries off with it a deal of coal that is unburned, merely coal in vapor, which gives out little heat for want of air to consume it. We lose the most of the unconsumed vapor of coal when the door is shut. When it is open the vapor is consumed, but the heat is reduced by a flood of cold air and carried up the chimney. -- What is required then is an air tight door over the ash pit, through which you can let in just what air is necessary for quick or slow combustion as desired. The door that admits the coal should be tight, and should never be opened except to put coal in. A small flue should aim at a stream of air, heated by contact with the stove, to mix with the gas on top of the fire. In buying a stove, if you find that the stove or furnace door must be left open when you want to moderate your fire, reject it; for it is essentially wrong in its construction, and it will consume three tons of coal where one would answer if the draft door were air-tight." (Lackawanna Citizen, February 2, 1852, p. 2)

In 1812, Colonel Shoemaker of Pottsville hauled nine wagon loads of coal to Philadelphia, where he sold two wagon loads and gave away the rest. One wagon load was sold to White and Hazard, who operated a wire works at the Falls on the Schuylkill River. About the efforts made by the workmen at White and Hazard to burn anthracite coal is described in *Century of Progress* as follows:

"An whole night was consumed in efforts to make the coal burn and, in final despair, the workmen abandoned the endeavor but chanced to leave the door of the furnace shut. Fortunately, one workman forgot his jacket and returning to recover it, found an excellent fire and the furnace red-hot." *COP* (p. 508):

Another initiative to sell anthracite coal in Philadelphia was made at this time by Colonel Hollenback of Wilkes-Barre. About this initiative, and about the extraordinarily important exposure, for our purposes in recording the history of the Delaware and Hudson Canal Company, of this novel fuel, anthracite coal, to Maurice and William Wurts at that time, and about the entrepreneurial initiative launched by the Wurts brothers at that time, we read the following in *Mathews:* 

"Use of anthracite was stimulated by the scarcity of charcoal during and after the War of 1812. / Colonel Hollenback, of Wilkes-Barre, sent two wagon-loads of 'stone coal,' as it was called, to Philadelphia, a portion of which was bought by William Wurts, a merchant of that city, who, with his elder brother, Maurice, was quite favorably impressed with the novel fuel. The Wurts brothers seem to have very early realized that anthracite must in time become an important article of commerce and determined to place themselves in a position to profit by it, for as early as 1812 we find these city-born and city-bred merchants toiling and patiently exploring the mountain wilderness of Pennsylvania in a practical, painstaking search for the true philosopher's stone [emphasis added]. / Following the Lehigh from Mauch Chunk far up into the forest to its very head-waters in the Pocono marsh, only to be baffled in their search for any new and unclaimed coal field, they struck at length into the almost equally wild and sparsely settled valley in which the Lackawanna runs, and without any previous knowledge of the region, traversed it for months, seeking everywhere for traces of the buried treasure. . . / Somewhere along the Lackawanna one of the Wurtses fell in with a nomadic hunter, David Nobles, who, to avoid imprisonment for debt, had fled from Wayne County and taken refuge in the woods, where he gained a precarious living with dog and rifle. Mr. Wurts aided him with money, employed him to hunt for him and bring knapsacks of provisions from Canaan township, in Wayne County, and took upon a debt a small tract of wild land which he had owned. A propos of this transaction, Hon. Paul S. Preston, of Stockport, wrote as follows in a letter to the Auburn (N. Y.) Daily Advertiser of January 19, 1849: / 'In the year 1814 I heard my father tell Maurice Wurts, in Market Street, Philadelphia, 'Maurice, thee must hold on to that lot on the Lackawanna that you took for debt of David Nobles; it will be very valuable some day, as it has stone-coal on it and under it.' (Mathews, p. 226-27)

The War of 1812, then in progress, had cut off the supply of coal from Liverpool, and the British naval blockade of the Chesapeake and Delaware Bays had likewise cut off the supply of bituminous coal from mines along the James River in Virginia to the seacoast cities farther north, among them Philadelphia.

Maurice and William Wurts immediately realized that there was money to be made if a source of anthracite coal could be found. They went into action. While exploring in northeastern Pennsylvania for coal lands, one day in 1812, they ran into David Nobles, a woodman from South Canaan township who owed \$15 to a man from Canaan Township named Goodrich, who

refused to accept a deed for a tract of land owned by Nobles in payment of the \$15. Goodrich, in 1814, got a judgment against Nobles, who fled to the wilderness to escape imprisonment for debt.

In the early nineteenth-century, it must be recalled, debtors' prisons were a common way to deal with unpaid debt. Many of these prisons were essentially locked workhouses, where persons unable to pay a court-ordered judgment were sentenced until they had worked off their debt via labor or secured outside funds to pay the balance. The product of their labor went towards both the costs of their incarceration and their accrued debt.

Imprisonment for indebtedness was not uncommon in early America. Remarkably, two signers of the Declaration of Independence, James Wilson (an associate justice of the Supreme Court) and Robert Morris (a close friend of George Washington's) both spent time in debtors' prisons. Horace Greeley's father hid to avoid imprisonment when, in August 1820, the sheriff and other officials, together with two or three Greeley creditors, seized the Greeley family's small farm in New Hampshire. Horace Greeley, later to found and serve as editor of the *New-York Tribune*, one of the great newspapers of its time, went to work at that time as a day laborer to support the family following the loss of their farm.

In the United State, debtors' prisons were banned under federal law in 1833.

#### To return to the Wurts Brothers:

In 1812, William Wurts acquired large holdings of coal lands in the Carbondale area, paying therefor from fifty cents to \$3 per acre. The Wurts brothers then opened mines and in 1815, they sent their first ark-load of coal to Philadelphia, which reached there before the end of 1815. The coal, at considerable expense (\$2.50 per ton) was hauled to the Lackawaxen in wagons and then floated down the Delaware to Philadelphia.

Between 1815 and 1822 they tried to market their coal in Philadelphia. They did not meet with success in doing so because that market was controlled by their competitors in the nearer Lehigh region. The Wurts brothers then decided that they would market their coal in the greater New York City area, where the population in 1820 was 152,056 (twice the size of Philadelphia).

In 1820, the first coal from Carbondale was exhibited at the Battery in New York City, with a sign which read: "Removed from the ground at a junction called Ragged Island in Northeastern Pennsylvania."

About 1822 the Wurts brothers mined a thousand tons of coal in Carbondale.

The naming of Carbondale:

From *Mathews*, p. 229, we learn that the name "Carbondale" was created in 1822:

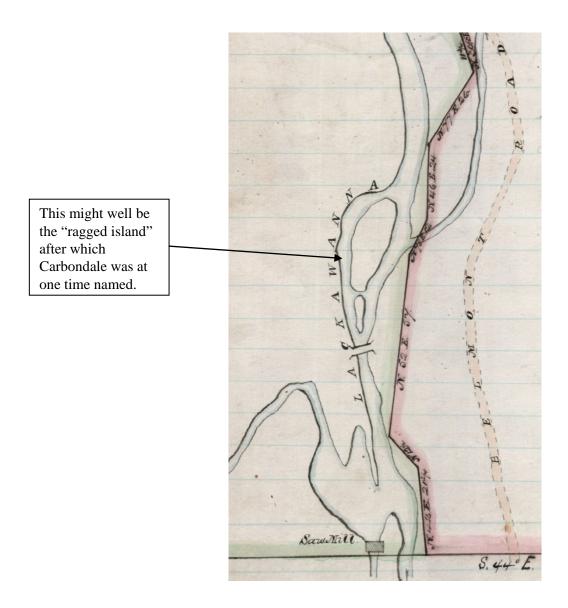
"In the mean time, in 1822, it is interesting to note that Carbondale had received its name from the Wurtses, before the spot so designated upbore upon its rocky soil a single house or cabin. The name was compounded by these gentlemen in Philadelphia, who marked upon a two-horse lumber-wagon in which they sent to the scene of their mining operations a load of tools, powder and camp paraphernalia, the legend 'Carbondale, one hundred and forty-three miles from Philadelphia, on the Lackawannock River, Luzerne County, Penna." The driver was directed to the site of the future town by D. Yarrington, who was staying at Moosic House, an obscure inn on the Moosic, in Rixe's Gap, and happened to remember that he had seen some strange fellows, accredited with vague notions about stone coal, digging in the woods down by the Lackawanna, and surmised that the supplies and camp equipage were designed for them."

*Hollister* (pp.17-18 of his unpublished typescript) confirms the above story as told by Mathews. Here are the words of Hollister:

"Carbondale was named by the Wurts [brothers] before a cabin was erected upon its site. The name was never suggested or spoken until 1822 and then it was compounded in Philadelphia by these gentleman from *dale* and *carbon*. D. Yarrington, Esq., an eccentric and yet very intelligent old gentleman now living in Carbondale, was boarding upon the mountain in Rixe's Gap in 1822 when a lumber two-horse wagon loaded with tools, powder and camp-life paraphernalia driven by a weary and lonesone teamster stopped at the Mountain House which was known and used as an 'Inn' by the occasional wayfarer. The teamster upon whom devolved the duty of finding the unnamed place being asked where he was going with his strange load, replied, 'to Carbondale.' He did not know where that was nor did any one else, but the stuff forming his load was marked in prominent lettering 'Carbondale 143 from Philadelphia on the Lackawannock River, Luzerne County, Penn'a.' / Mr. Yarrington, knowing that some fellows credited with vague notions about stone coal had been digging in the woods down by the Lackawanna for some time, some three miles from the Mountain House, was able to direct the bewildered teamster to the camp ground under the hemlock, thus and then christened Carbondale."

Carbondale at one point was known as "Ragged Island":

In *D&H Deeds Luzerne I*, on page 10, there is a map that illustrates the deed, pp. 1-6, dated July 28, 1825, between John Wurts & others, Trustees, and The Delaware & Hudson Canal Company. On that map, the island in the river in Carbondale (at one time known as "Ragged Island") is shown. The stream entering the river is Racket Brook. Here is that map:



In 1823, the Delaware and Hudson Canal Company was established to mine and market anthracite coal.

About these early D&H mines in Carbondale, we read the following in the supplement to Glen Glen Dietrick's *History of Carbondale:* 

"Early Mining. / The first mining in Carbondale was carried on by the D. & H. Company near the present Seventh Ave. Station. The coal was wheeled out in wheel-barrows. This place was known as Inghram's level. The Lackawanna used to run through the city following a course along the foot of the bluff now known to us as Sandy's Field. It was found, however, that the coal bed sloped under the river and the course was changed above the city, causing it to flow through its present channel at some distance from its original course. In 1829 a tunnel was driven near the spot marked by the monument at the foot of Seventh ave. This was worked till 1857. The next year, 1830, No. 2 drift situated just west of No. 1 drift was opened. About the same time No. 3 on what was known as the Highroad drift was opened. This was down in the locality of the Electric Sub-station on Pike Street. This year a slope and water power was used to draw the cars out the slope. In 1835, the New Mine, situated at the foot of Davis's back plane (in the vicinity in the Dundaff St. crossing) was opened and continued working till 1850. The first shaft driven in Carbondale was near the old No. 1 drift. In the 1840s the Fall Brook levels 1, 2, and 3 were opened. The above mentioned comprised all the openings made prior to 1851."

The Early coal operations of the Delaware and Hudson Canal Company in Carbondale are described in 1880, p. 446, as follows:

"The first coal was mined at the foot of Damon's plane from the bed of the river, by diverting the river from its channel and running a level into the hill. The coal was run out on a wheelbarrow. This was called Inghram's level. In 1829 a tunnel was driven on the opposite side of the river at old No. 1 drift. This drift was worked till 1857. No. 2 drift, west of No. 1, was opened in 1830. January 12<sup>th</sup>, 1846, the roof of this mine fell in over a space of half a mile long and forty rods wide. About sixty men were shut in, of whom all but fourteen succeeded in effecting their escape. The bodies of five were never recovered. No. 3, on the 'High road' drift, was opened about the same time. This was a slope and was pumped by water power up to 1838. / The 'New mine,' at the foot of Davis's back plane, was opened in 1835 and worked until 1856. No. 1 shaft, which was the first shaft put down here, was sunk in 1843. This was used for pumping water. The first rock slope in the Lackawanna valley was started at high water mark on the bank of the river, and descended to the coal at a pitch of nine and one-half degrees. Six hundred tons per day are now [1880] hauled up this slope, besides pumping the water from the mine by water power. The top vein is worked out here and the bottom is being worked. The two are separated by eighteen inches of bony coal. / Fall Brook levels 1, 2 and 3 were opened in 1846 and abandoned about 1857. The coal from these levels is worked from the 'White Bridge' tunnel and hoisted at No. 1 plane. The 'White Bridge' was begun in 1865, No. 2 shaft, near the line of Fell township, on Coal creek, was started in 1853, and abandoned in 1861. No. 3 or 'Lookout' shaft was started at the same time in the third ward of the city. The engine house of this shaft burned May 20<sup>th</sup>, 1874, but was rebuilt the same year. Here are two Cornish bull pumps, lifting 2,700 gallons per minute a height of 74 feet. Steam was first used at shafts 2 and 3. The Powderly tunnel, which

was started in 1855, has been full of water more than five years, having filled during a miners' strike. The Powderly mine, in the south district of Carbondale township, was begun in 1845. It has three drifts, but never did much. Coal Brook rock tunnel, 800 feet long, was started at the mouth of No. 2 shaft, and is now working. Lackawanna tunnel was started in 1864 near Coal Brook breaker, and driven north to the bottom vein. Forrest tunnel, fifty feet higher, driven to the top vein, was begun in 1867 and abandoned in 1871. Valley tunnel, east of the others and working the bottom vein, was driven in 1868, and is now working. 'Breaker' slope was driven in 1869, to the bottom vein, and has been idle since 1876. Mill Ridge slope, to the top vein, driven the same year, is now being worked, as is also the 'Midland,' driven in 1873. The company has no breaker in Carbondale, and separates the coal into lump, steamer and 'breaker' coal. The last is taken to a breaker at Rackett brook, where it is prepared. This breaker was built in 1856, and rebuilt in 1868. / Coal Brook breaker, just above the depots of the railroads in this city, was erected in 1867, and is the largest in the United States. It has a capacity of 1,400 tons per day. It has no rolls, and the coal is separated by screens, the finer coal going to the Rackett Brook breaker. / About 1,200 men and boys are employed by the company at its mines here. A. H. Vandling is superintendent of coal; A. G. Nicol, general mine boss; William Bowers, outside foreman; John Campbell, mine boss at No. 1; John Hughes, mine boss at No. 3; William McMyne, mine boss at Coal Brook. About 1,600 tons per day are mined, while the mines have a capacity of 2,500 tons."

One of the first coal mines opened in the Lackawanna Valley below Carbondale was opened by Lewis S. Watres, the father of the Honorable Louis Arthur Watres at Winton. In the biographical portrait of the Hon. Louis Arthur Watres (*PABRLC*, pp. 820-21) we read the following about his father, Lewis S. Watres:

". . . born in Phoenixville, Pa, in 1808, and when twenty-seven years of age came to Lackawanna Valley, locating in what is now Winton, where he purchased four hundred acres of land, and began developing his timber interests. In 1837 he erected the first church in the valley, at Pecktown—a Presbyterian Church—and he bore the entire expense with the exception of \$12 contributed by others. To him also belongs the credit of opening up one of the first coal mines in the valley below Carbondale."

The wife of Lewis S. Watres was Harriet G. Hollister, who was a poet and wrote under the name of "Stella of Lackawanna."

A very good account of early D&H and coal history was published in the *Carbondale Leader* of August 24, 1892, p. 4. Here is that account:

Early Carbondale Coal History] "EARLY LOCAL HISTORY. / Reminiscences Called Up by the Death of C. P. Wurts. / The death of Charles Pemberton Wurts, which occurred at Bar

Harbor, Maine, August 11th [1892], aged nearly seventy years, calls up some reminiscences of the past, says *The Honesdale Independent*. We are told by history that the value of anthracite as a heating agent was first successfully demonstrated by Judge Jesse Fell, of Wilkes-Barre, in 1808, but his experiments produced not the wild excitement they would had the future of anthracite been foreseen, and awakened only a mild interest throughout the valley and induced a few individuals to look with more favor than they had previously upon the 'black stuff' that cropped out along the streams and littered the soil. No coal was sold in the country for a number of years, for, although the blacksmiths learned to use it they all went to the places where it was exposed, gathered all they wanted and carried it away with as little concern as one now might appropriately dry leaves from the forest. Colonel Hollenback, of Wilkes-Barre, sent two wagon loads of 'stone coal.' as it was called, to Philadelphia, a portion of which was bought by William Wurts, a merchant of that city, who with his elder brother Maurice, was quite favorably impressed with the novel fuel. The Wurts brothers seem to have very early realized that anthracite must in time become an important article of commerce and determined to place themselves in a position to profit by it, for as early as 1812 we find these city-bred merchants patiently exploring the mountain wilderness of Pennsylvania, in a painstaking search for the true philosopher's stone. Following the Lehigh from Mauch Chunk far up into the forest to its very head waters in the Pocono marsh only to be baffled in their search for a new and unclaimed coal field, they struck at length into the sparsely settled valley in which the Lackawanna runs, and without any previous knowledge of the region traversed it for months, seeking everywhere for traces of the buried treasure. Somewhere along the Lackawanna one of the Wurtses fell in with a nomadic hunter, David Nobles, who to avoid imprisonment for debt, had fled from Wayne county and taken refuge in the woods with rifle and dog. Mr. Wurts aided him with money, employed him to hunt for him and to bring knapsacks of provisions from Canaan township and took upon a debt a small tract of wild land which he had owned. Apropos of this transaction, the Hon. Paul Preston, of Stockport, wrote as follows in a letter to the Auburn (N. Y.) Daily Advertiser, of January 19, 1849: / 'In the year 1814 I heard my father tell Maurice Wurts in Philadelphia, 'Maurice thee must hold on to that lot on the Lackawanna that you took for a debt of David Nobles; it will be very valuable some day, as it has stone coal on it and under it.' '/ After buying and obtaining the refusal of several tracts of land on which they found 'black stones,' the Wurtses began looking about for a route by which they could carry anthracite to the market. By measuring the distances and observing the depth and current of the streams flowing eastward from the Moosic mountains, they found the Wallenpaupack and the Lackawaxen offered the best encouragement to the plan of reaching New York. It was the intention of the explorers to make the greater part of their purchases in the vicinity of Providence but the lands there are more fertile than those further up in the valley and the owners were unwilling to part with them for less than \$5 per acre. Hence they sought the region of the Ragged Islands and studied upon passing the mountains by Rixe's rather than Cobb's Gap and thus it became possible for Honesdale to be developed upon the Hemlock covered ground at Dyberry Forks. / Another reason which influenced the projects of this coal enterprise to choose the more northern outlet

was the superior advantage that it possessed over the southern or Cobb's Gap route. / By 1816 a small quantity of anthracite had been mined, a portion of which the Wurts brothers attempted to place in a reluctant market. Their friend David Nobles was engaged in clearing Jones creek from driftwood. When this had been done two sled loads of coal which had been drawn over the mountains, was loaded upon a raft and with difficulty floated down the stream a short distance when the frail craft caught upon a projecting rock, whirled round in rapid current and its precious cargo wrecked. It had been the purpose to steer the raft down the Wallenpaupack and the Lackawaxen to the Delaware and thence to Philadelphia. A more successful attempt was made a little later. This time the coal was drawn on sledges over the old Connecticut road a distance of twenty miles to the Wallenpaupack, shipped on rafts to Wilsonville, conveyed in wagons to Paupack Eddy and there transferred to arks floated to Philadelphia. This mode of transportation was however too expensive to be practicable. Hence the efforts of the pioneers in the grand drams of progress were directed solely to Rixe's Gap and the Lackawaxen. / After spending ten of the best years of their lives in an indefatigable effort to interest capitalists in the scheme of developing the coal mines and building a canal and railroad for its transportation, they succeeded. They spent the greater part of their private fortunes in the enterprise but lived to retrieve it." (Carbondale Leader, August 24, 1892, p. 4)

An excellent account of early D&H coal operations is also presented in the article titled "A Century of Anthracite" by W. J. Coughtry that was published in the December 15. 1928 issue of *The Delaware and Hudson Company Bulletin* (pp. 373-377, 379-380). Here is that article:

# A Century of Anthracite

The Hundredth Anniversary of the Arrival of the First Cargo to Reach

New York City

By W. J. COUGHTRY, Recorder



Packet Boat On Canal

NE hundred years ago—December 10, 1828,—there arrived in New York City from Kingston, New York, a small sloop, the Toleration, with a tiny cargo of ten tons of a new and untried fuel. Its quiet, uneventful arrival, unaccompanied by the screeching sirens of the present day, opened the era of coal in the eastern United States, particularly the Metropolitan District and the terriory of the Hudson River.

This new fuel—Lackawanna anthracite—had come from the coal beds at Carbondale, Pennsylvania; had been hauled by wagon across the Moosic Mountains to Honesdale; was a part of the first shipment of coal to be transported through the Delaware and Hudson Canal for its entire length from Honesdale to tidewater at Rondout, now Kingston, New York, and was the first cargo commercially to reach the Metropolis.

Nothing in the world, perhaps, seems more commonplace, or a matter of course, than anthracite fuel; yet it is the product of but little more than the last 100 years. Although there is a tradition that between 1750 and 1755 the Indians near Nazareth, Pennsylvania, knew that anthracite would burn, the first mention made of coal on the early maps of that Commonwealth appears on one of Sunbury manor, comprising all of the westerly side of the Wyoming Valley opposite

Wilkes-Barre, made by Charles Stewart in 1768, which noted "stone coal" in Ross Hill. Obadiah Gore, a blacksmith, used it in his forge at Wilkes-Barre in 1769, and is believed to be the first white man to have developed Pennsylvania anthracite for heat.

The first recorded shipment of anthracite was two "Durham" boatloads from Mill Creek, near Wilkes-Barre, to Harris Ferry, now Harrisburg, from whence it was hauled by wagons to the arsenal at Carlisle for use by the proprietary government of Pennsylvania in the manufacture of frearms for Revolutionary soldiers. This is also its first known industrial use and it seems fitting that it was made to forge the arms that made the United States a republic.

An effort to introduce anthracite in Philadelphia in 1792 failed, its vendor being unable to give it away and he was nearly mobbed for trying to impose upon the people with a lot of worthless "black stones" for fuel. With the exception of the Carlisle arsenal, blacksmiths seem to have been the only users of anthracite until February 11, 1808, when Jesse Fell burned it successfully in an iron grate in his home in Wilkes-Barre and found that it would serve as fuel, making a cleaner and better fire at less cost than wood. Efforts to introduce anthracite in Philadelphia as

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three hundred and seventy-three

a household fuel, made in the same year again met with derision. In 1812, anthracite was sent to Philadelphia, the shippers taking their grates with them. This time many Philadelphians tried it and found it better than wood for house heating and cooking, and in that city anthracite had its first real market.

Prior to the War of 1812 our struggling manufactories were dependent upon bituminous coal imported from England and the wood and charcoal produced at home to feed their furnaces. When that war cut off the English coal, wood and charcoal prices reached such high levels that men who knew the properties of anthracite urged its use as a substitute. Foremost among these men were William and Maurice Wurts, two enterprising dry-goods merchants prominent in the business life of Philadelphia, the originators of the plans and projects out of which grew The Delaware and Hudson Company.

Almost immediately they began to explore the Pennsylvania forests and streams, finally reaching the Lackawanna valley, then almost an unbroken wilderness, where they purchased hundreds of acres of coal lands in the section that now includes Carbondale, Archbald and Olyphant. Simultaneously they examined the width and depth of the larger streams seeking to provide a means of transportation to what they needed-a city market. By 1822 they had mined at Carbondale about a thousand tons, but their efforts to market their product in Philadelphia by transporting it by teams over the Moosic mountains and thence by arks and rafts down Jones' creek to the Delaware river met with disappointment and failure.

The Wurts brothers then turned to New York, a potential market in which anthracite was totally unknown, where they demonstrated its utility. With no direct means of communication with the anthracite fields it became necessary to create a practicable means of transportation. Naturally their first efforts were directed towards canals, then the only recognized means for long distance transportation, and they formed a plan to cross the Moosic mountains with a railway to the Lackawaxen river and to build a canal thence to the Hudson river at Rondout. After William Wurts had covered the entire distance on foot and found the route feasible, he and his brother, Maurice, again visited New York and succeeded in interesting a number of influential men, including DeWitt Clinton, then governor of the state, Philip Hone, later mayor of the city, and others in the development of the enterprise.

On April 23, 1823, they secured a charter from the legislature of New York incorporating "The President, Managers and Company of the Delaware and Hudson Canal Company, with authority to open water communication between the Delaware and Hudson rivers, to purchase coal lands and to transport "stone coal" to the city of New York and to other parts of the state. Meanwhile the Wurts and their associates in Philadelphia had taken the first actual step by securing a franchise from the legislature of Pennsylvania, on March 13, 1823, to canalize the Lackawaxen river to provide a good descending navigation from a point near Wagner's or Rix's Gap to the Delaware. The interests of both groups being identical, each covering but a part of the proposed enterprise, they were ultimately combined, the New York company acquiring by purchase the rights and properties in Pennsylvania.

The qualities of anthracite as a fuel were publicly demonstrated on January 5, 1825, in a grate set up in the Tontine Coffee House, located at the northwest corner of Wall and Water streets in New York City, and two days later subscription books for the stock company were opened simultaneously in the Coffee House, at the Middle Distriet Branch Bank in Kingston, and at the Orange County Bank in Goshen, New York. The stock was largely oversubscribed by early afternoon, necessitating the creation of a practice that is still followed of accepting only the smaller subscriptions in full and allowing the larger subscribers a percentage only of their subscriptions. The first meeting of the stockholders followed on March 8, and four days later the organization was completed by the election of Philip Hone, as president, and John Bolton, as treasurer.

Two months later Benjamin Wright, under whose supervision surveys, begun in 1823, had been made, submitted his report to the Board of Managers recommending the construction of a canal from the Hudson river at Rondout, now Kingston, to the foothills of the Moosic mountains at the forks of the Dyberry, now Honesdale, and of a good road or railway, "the latter preferred," across those mountains to the coal beds at Carbondale.

On July 13, 1825, contracts were let for seventeen miles of canal construction and ground was broken at Mamakating, later renamed Wurtsboro in honor of the Wurts brothers; Philip Hone, the president of the company, turning the first spadefull of earth and delivering an address, setting forth the object of the canal and the benefits expected to follow its completion. Contracts for the remainder of the canal followed in quick succession and it was completed in October, 1828. The first boat to navigate its entire length was the Orange packet which left Rondout on October

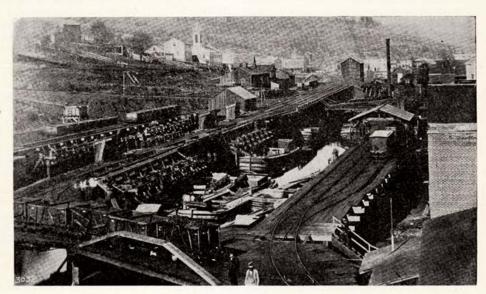
three hundred and seventy-four

December

16, carrying the Board of Managers who were tendered a public reception upon their arrival at Honesdale. It was the largest undertaking that had been entered into on this continent by private enterprise, and its construction, together with the railroad across the mountains to Carbondale, which was completed a year later, was accomplished by manual labor in the use of axe, pick, shovel, wheel-barrow and wagons, and without any of the modern machines and tools for doing such work.

The canal, which upon leaving the Hudson followed the Rondout valley, crossed the Shawangunk mountain, followed the valley of the Neversink to the Delaware, thence along and across new channel of inland communication toasts were drunk by the captains of the boats as they passed through various hamlets along its banks, many of which were brought into being by the undertaking. It is unfortunate that only a few of the toasts have been preserved. Of these, drunk as the squadron pushed its way through Sullivan and Ulster counties on December 3, 1828, the following are indicative of the sentiment toward the company, its founders, its officers and its employes.

As the squadron passed through Cuddeback's, Sullivan county, on December 3, 1828, the captains burst forth in poetry. Captain Hickson, of



Honesdale Dock

that river to the Lackawaxen which it followed to Honesdale, was 108 miles long. It was carried across four rivers, the Rondout, Neversink, Delaware and Lackawaxen, on aqueducts, had 110 locks and was spanned by 137 bridges. The first boats carried twenty-five tons each, but by enlargements in 1844, 1850 and 1862, boats carrying forty tons, 100 tons, and from 125 to 150 tons were used.

The first anthracite to pass through the canal, carried in a fleet of ten boats, each carrying ten tons, left Honesdale in November 1828, and reached Rondout on December 5.

As the fleet of tiny coal-laden craft glided slowly eastward through the quiet waters of this the Superior, apparently leading the van, drank a toast to the company in these words:

"Vast and important is the work by them begun, May they still prosper till with joy they see it done."

Captain Kortright, of the United States, drinking to Maurice Wurts, agent of the company and one of its founders, said:

"With eagle eye he view'd, with wisdom plann'd, No obstacles his skill and power withstand. Honor be his, and wealth at his command."

Captain Lomerau, of Company Boat No. 2, drank to Philip Hone, the first president of the company, with these words:

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three hundred and seventy-five

## The Delaware and Hudson Company Bulletin

"Beloved, respected, honoured may he be Who did such honor to the company."

John B. Jervis, chief engineer, was acclaimed by Captain Terwilliger, of the Oliver H. Perry as:

"Possessed of wisdom, perserverance, skill, Nicely to plan and promptly to fulfill, Long may he live, respected, honored too, And reap the just reward to merit due."

And to the boatmen engaged in navigating the canal, Captain Doll, of Company Boat No. 20, drank:

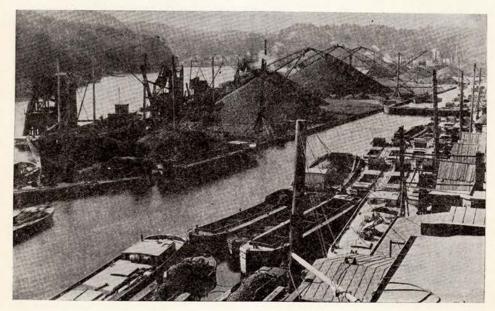
"May they with care and skill conduct each boat,
Which doth or may along this channel float,
Be blessed with peace and plenty, health and joy,
Please both themselves and they who them
employ."

At Wurtsboro and Ellenville they toasted the company as the greatest individual enterprise undertaken, hailing it as a proud triumph of human art over the ponderous obstacles of nature, and a brilliant star among the public improvements of the state. In similar vein the founders, managers, officers and employes were toasted as men distinguished, influential, cool, collected and undaunted by the most imposing obstacles and untiring in their zeal for the enterprise. At Ellenville the toast to the new fuel,

"May the demand for it keep pace with the supply, and may the profits derived from its consumption be applied in process of time, to further improvements of the country by means of artificial navigation," was given.

The approach of the squadron was heralded in Kingston and Rondout and many citizens and military gathered on the hills forming the banks of the Rondout to welcome its arrival. As the coal-laden craft came in sight with the Kingston band, which had boarded the leading boat at Eddyville, playing appropriate airs they were saluted with discharges of cannon and musketry and with repeated cheers. The assemblage was addressed by several speakers, one of whom asserted that there were people within the sound of his voice who would live to see a hundred thousand tons of coal arriving by the canal in one year. Few of the assemblage perhaps would have accepted in lieu of the speaker's "hundred thousand" the nearly two millions of tons later to pass through it annually when even Maurice Wurts, the soul of the enterprise, in the wildest flights of his ambition dreamed only of being able to bring half a million tons to tidewater

It was a part of the cargo of this squadron that was transferred to the sloop *Toleration* which made its epochal entry into New York



Coal Operations, Rondout, (now Kingston), N. Y.

three hundred and seventy-six

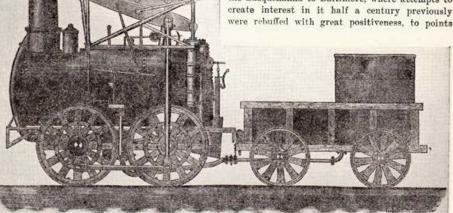
December

City five days later and opened up a new era which enabled that city to more than double its population in a quarter of a century. A portion of her cargo was burned in the grates of the Western Hotel on Cortlandt Street in the latter part of January, 1829, which so demonstrated its free burning qualities that during the cold wave that followed a month later Philip Hone, in his diary, deprecated the fact that there was "no coal for sale in the city." Fifty tons of the coal

efforts for enlargement of the business by investigating the Boston market, sending samples to Providence and even shipped several hogsheads containing anthracite to New Orleans. In 1831 they extended its use to steam production in the furnaces of the Ulster Iron Company, the steamboat Victory, and the Walnut Street ferryboat Experiment, and employed agents to introduce the use of anthracite in manufactories and other establishments using steam engines and in blacksmith forges.

By 1836 the use of anthracite was extended to the Hudson River steamboats. On June 23 of that year, the Novelty, with the managers of the company and a party of distinguished guests, left her wharf in New York at six in the morning and arrived at Albany twelve hours later, the first steamboat propelled by anthracite to make such a voyage.

In 1848 anthracite was successfully used in the manufacture of salt at Syracuse and Salina. By 1868 the company was shipping anthracite down the Susquehanna to Baltimore, where attempts to create interest in it half a century previously were rebuffed with great positiveness, to points



Stourbridge Lion

transported by the same squadron was forwarded to Albany where a portion of the shipment was tried by the clerk of the Senate "in one fire in that room," and a ton was sent to Governor elect Martin Van Buren.

The supremacy of anthracite for heating purposes now firmly established, the managers of the infant company eagerly sought new outlets for their product. Early in 1829 the managers had a range installed in the kitchen in the company's office and banking house in New York City to demonstrate its adaptability for cooking purposes. During the next year they redoubled their

on the railroad line between Wilkes-Barre and Jersey City, and two years later entered the rapidly developing markets of the west.

In 1829 the company moved seven thousand tons of anthracite through the canal to tidewater, marking the beginning of the important industry of mining and transporting coal. At the end of its first decade of existence the tonage moved through the canal had increased to more than one hundred and twenty thousand tons; in 1846 to more than half a million tons, the greatest dream of Maurice Wurts, and reached

(Turn to page 379)

three hundred and seventy-seven

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# A Century of Anthracite

(Continued from page 377)

its maximum of over one million nine hundred thousand tons in 1864.

Although the canal was primarily constructed for the express purpose of moving anthracite, traffic became general in 1829. On October 7 of that year the company inaugurated a packet service between Honesdale and Rondout, two boats, the Luther Bradish and the Silas Wright, Jr., elegantly fitted up, making three trips weekly.

Although only a few of the canals achieved a moderate degree of financial success, they rendered immense service to the country not merely by furnishing avenues for transportation but by establishing a foundation for the great railway enterprises by which they have been succeeded and supplanted.

The construction of local railway lines as feeders to canals began in the Thirties, and by 1847 there had been built 503 miles in the anthracite regions alone. These soon expanded into longer and larger systems which, by 1870, crowded the canals from their dominant position as coal and freight carriers.

From that period the history of the Delaware and Hudson canal is an uneventful one of decline and abandonment. The opening of new markets which could be supplied throughout the entire year by the quicker and cheaper rail transportation became too great to meet rail competition, and at the close of the season of navigation in 1898 the canal was abandoned, its cost charged off and after almost a century of honorable existence lost its place as an asset on the books of the company.

The last boat to pass through the canal, No. 1107, was loaded with anthracite and cleared Honesdale on November 5, 1898. It was indeed appropriate that the last boat to navigate it should, like the first, transport a cargo of anthracite.

This great avenue of transportation that had for seventy years brought prosperity from the Hudson to the Delaware and a wide range of country that felt its influence was obliterated. The canal itself, abandoned, soon fell into ruin and decay. The once costly mason work and great feats of engineering and mile upon mile of towpath, once made adamant by the tramp of countless horses and mules, became crumbling ruins, overgrown with weeds and rank growths of underbrush. But this pioneer waterway, every mile of which is in some way intimately con-

neeted with some chapter of history, some incident of romance or some subject of poet's song, through which millions of tons of anthracite were borne to tidewater, will never be forgotten. It will instead be long remembered as the pioneering instrument that gave employment to thousands and brought comfort, convenience, industrial activity and prosperity to millions of people.

As the history of coal is the story of industrial America, so is the history of coal the story of the development of rail transportation. During the location and construction of the Delaware and Hudson canal, the company's engineers, finding the crossing of the Moosic mountains was not feasible, recommended the construction of a rail-way from the proposed terminus of the canal at Honesdale to Carbondale as the final link in the transportation route from the anthracite beds to tidewater.

Attracted by English progress in railways and in the development of the steam locomotive, the management resolved to use this method for crossing the Moosic mountains. A survey was made by John B. Jervis and his route was adopted after a careful review by Benjamin Wright and Professor Renwick, eminent civil engineers. The railroad, sixteen miles long, consisting of inclined planes on which cars or wagons were moved by rope-haulage with the use of winding drums, actuated by stationary engines, and levels or moderate gradients between the planes on which the use of locomotives was planned, was originally a single track road with rails of hemlock stringers six inches by twelve inches set on edges and of twenty and thirty feet lengths, held together by cross ties at intervals of ten and fifteen feet, supported on posts set in broken stone or on stone piers. The running surface of the wooden rails was capped with wrought iron strap rails two and one-half inches wide, half an inch thick, about fifteen and one-half feet long, and secured by wood-screws.

The road was calculated to transport 540 tons of anthracite per day or 129,000 tons per year of 200 working days. Through successive enlargements, double tracking and other improvements its capacity was increased in 1868 to 2,000,000 tons annually.

The first car of anthracite passed over this railway on October 9, 1829. Like the canal, the railroad was originally constructed as a freight carrier exclusively, but from the inauguration of "As the history of coal is the story of industrial America, so is the history of coal the story of the development of rail transportation."

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three hundred and seventy-nine

passenger service between Honesdale and Carbondale on April 5, 1877, this portion of the line quickly sprang into fame on account of its novel construction and scenic beauty and was visited by innumerable travelers. This prominence it retained until its conversion to steam locomotive operation.

Upon the abandonment of the canal and the diversion of anthracite to the numerous new markets created by the development of through rail transportation this remarkable road ceased to function as a link in the route to tidewater, and in 1899 it was converted into a steam locomotive line entirely dependent upon an extremely small local traffic.

The rails and locomotives for the railroad were secured in England by Horatio Allen, an assistant engineer of the company. One of these locomotives, after a steaming trial in New York City for the dual purpose of demonstrating the value of the new fuel and of the steps taken to supply the city with it, was sent to Honesdale and made its famous trial trip, driven by Horatio Allen, on August 8, 1829.

This locomotive, the Stourbridge Lion, although discarded after a second trial because its weight was too great for the track structure. It was the first to turn a wheel on a railroad in the Western Hemisphere and the progenitor of the massive and powerful locomotives that now annually haul the millions of tons of anthracite necessary to keep our industries going and our homes and firesides comfortable. Its boiler, one of the cylinders and several of its parts are now on exhibition in the Smithsonian Institution at Washington.

The company has not rested upon its laurels from the achievement of the Stourbridge Lion. It has ever since kept in the van in locomotive development and nearly a century later introduced the newest and most efficient type of locomotive in freight service. This design, the result of more than forty-five years of research and study by L. F. Loree, president of the company, with the aid, in later years, of officers and employes, revolutionized the old water heating practices, doubled the usual steam pressure by an increase to 400 pounds and through elimination of auxiliary devices and refinements in design considerably reduced its weight. This locomotive, the John B. Jervis, by its satisfactory performance and its economy in daily operation has again ushered in a new era in locomotive engineering and, in addition, demonstrated that the steam locomotive will long continue dominant in long-distance transportation, even though accompanied and complemented by airplane, waterways and the motor bus. The contrast between the Stourbridge

Lion and this powerful locomotive is one of the most graphic illustrations of the changes that a century has wrought.

There are few public enterprises which have conferred greater benefits upon the country than The Delaware and Hudson Company. Besides being the first to secure for the city and state of New York, New England and a portion of Canada a dependable supply of anthracite; to build and subsequently abandon, when its superiority as a means of transportation had been lost, a canal that performed useful economic service for seventy years, and to bring from England and operate the first locomotive to run on an American railroad, it has developed a railway system occupying a most important position with regard to the industries of the United States and Canada, and brought into being innumerable communities which without the anthracite it mined and transported could have had no existence. Further it has developed and expanded iron ore mines, furnaces, passenger steamers on Lake George and Lake Camplain, urban trolley and motor bus lines, summer hotels and forestry operations. Its progress has been part of the progress of the United States, to which it has in due measure contributed.

The wildest dreams of the pioneers in anthracite development never pictured to them the possibility that the new fuel would become one of the greatest factors in insuring the comfort of the people and involving the existence of the commercial activities of a most important era in the country's progress and prosperity. Neither did they dream that it would make so largely the transportation system of the country subservient to its demands. So universal has the use of anthracite become both for domestic and industrial service that the present generation seems to regard it as having been with us always.

Anthracite has a most remarkable history—a tale which teems with the romance of adventure and strife, with commerce and manufacture. This fuel has helped make the republic; brought the first locomotive to America; generated the steam by which it was operated; developed industry and water and rail-transportation systems; transformed wildernesses into teeming cities, and given employment to thousands upon thousands of men, many of whom are still delving deeper and deeper into the earth for a continuing supply without which we suffer physical, financial and industrial hardship.

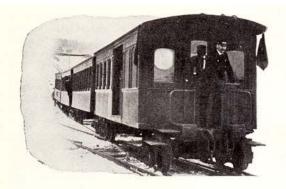
A hundred years in America means practically the history of the real development of the nation. And one of the greatest factors in all of this has been anthracite.

three hundred and eighty

December

The industrialization of America and anthracite coal

Yet another very good account of early D&H anthracite coal activities is presented in "Up Hill and Down Dale by Gravity Rail" by N. H. Hiller, Jr., which was published in *The Delaware and Hudson Company Bulletin*, June 1, 1931, pp. 165-167, 172. Here is that article:



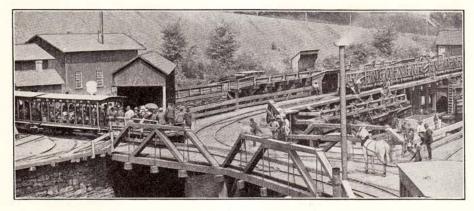
# Up Hill Down Dale Gravity Rail

By N. H. HILLER, JR.

O the residents of Pennsylvania, this famous old railroad may be more or less familiar in a general way; but it is almost certain that, as each generation takes the place of its predecessor, the knowledge of the work of the Delaware and Hudson Canal Company is gradually becoming more and more obscure, until that time will come when only a very few will recall any of the details of the first commercially successful railroad in America. Created a corporation by an act of the New York State Legislature in 1823, this railway became the one on which the first locomotive to run in America turned its wheels, the one which was directly responsible for the development of the enormous anthracite coal fields of Scranton and Carbondale and the one which utilized both waterways and steam for transportation over its lines.

In order to understand better the causes for the construction of the railway and canal, it would be wise to delve into the history of Northeastern Pennsylvania during the latter part of the Eighteenth Century. There are many stories about the discovery of anthracite or hard coal, and a few of them are retold here. In regard to the finding of hard coal along the Susquehanna River, Connecticut pioneers, migrating from New England to the pioneer lands of the then totally unknown region of Pennsylvania, found outcroppings of coal along the river bank near the place where Wilkes-Barre is now located. This was in about 1762. Obadiah Gore, a pioneer settler of Wilkes-Barre, was reputed to have used hard coal in his blacksmith forge as early as 1769, and in 1775 coal was shipped from the mines to the river bank by mule and horse team, thence down the river in flatboats to Harrisburg and transferred there again into wagons to be taken to various iron foundries for the making of arms during the Revolution.

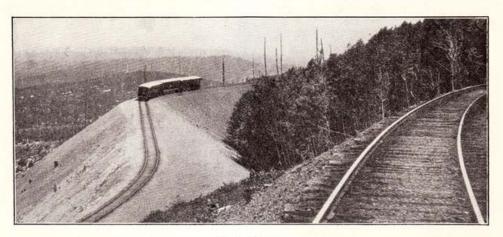
Another interesting story of the development of the coal lands in the northern end of the anthracite valley at Carbondale tells us that in 1802,



Gravity Railroad Terminal and Canal Docks, Honesdale

Captain George Rix, who lived near the present site of Waymart, persuaded some Rhode Island farmers to migrate thither and clear land for themselves. These men soon brought others and in 1810, a wheel-wright from Duchess County, New York, settled on a farm on the outskirts of the little town. This man, Christopher Wilbur, was the first to discover the existence of hard coal in this region and he began to use it in his trade. Two

or hard wood, they had been the victims of a swindle. Colonel lowered his price to a few cents a wagonload and then, finding that none would buy, had appeared before a group of men at Wagner's Coffee House and had offered the entire quantity remaining to whoever would cart it away. One of the men answered him that the Lord had decreed that people should burn wood and English coals, and did Colonel Shoemaker expect to



Shepherd's Crook

years before this time, however, Judge Jesse Fell, a resident of Wilkes-Barre, used some "rock coal" to dampen off the fire in his grate—and discovered to his delight that it would burn in the open air without being forced and that it gave forth much heat. From then on, the use of hard coal for cooking and heating in these districts became more and more common, and newspapers gave much attention and prominence to the fact that "the bright slatelike stuff called hard coal" would burn and give off heat.

The experience of Judge Fell did not, however, restrain the angered residents of Philadelphia from driving out of their town as an imposter one Colonel George Shoemaker, a Pottsville citizen, who had brought seven wagonloads of coal from Pottsville for sale during the latter part of 1812. Colonel Shoemaker had worked hard to fill the seven wagons with coal mined on his lands and had transported them overland to help the problem of fuel shortage which confronted Philadelphia during the War of 1812. He had intended selling the coal at three dollars a ton, and had even made several sales when some of the citizens who had tried to burn the substance thought that, because it did not ignite and burn like the English soft coal

perform a miracle in making black rocks burn? When other people warned the Colonel that officers had sworn out a warrant for his arrest on the charge of defrauding the public the Colonel left town. What would happen today if a man should appear in Philadelphia and offer several wagonloads of hard coal to whoever would cart it away?

The blockade of merchant ships during the second war with England had caused much suffering in the United States. At that time, all the coal used in this country was brought from Newcastle and other English ports. But the rigors of the war made the people turn to their own resources and it was at the end of 1814 that the eastern cities felt such a shortage of fuel that men migrated into the coal regions to begin the mining of the new fuel. It must be remembered that, at that time, few people lived in the soft coal fields of the state and those resources were entirely unknown and unappreciated.

Among the men to migrate were two tailors from Philadelphia, William and Maurice Wurts. They struck off across the hills into the interior of Pennsylvania and at some time during 1816, hearing of the vast deposits in the vicinity of Carbondale, journeyed thither to see if these de-

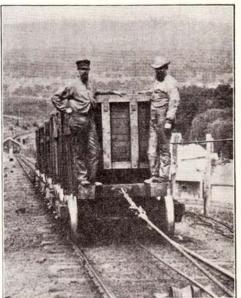
posits might be made of practical commercial value. Some coal was mined in 1816, but they were unable to bring this to any market because of the nature of the territory surrounding Carbondale, the unfriendliness of the natives and the rigors of the climate. They therefore began to make friends in the region and to locate any way by which they could transport their product to a market. Philadelphia seemed to be the most logical point to reach because of the Delaware River, which flowed some thirty miles from Carbondale to the east. During the years of 1821 and 1822, they succeeded in mining many hundreds of tons of anthracite at Carbondale and during the winters had transported it over the hills to the Delaware where, during the spring freshets, they hoped to raft it down the river to Philadelphia. But they had reckoned without the cost,



Delaware and Hudson Canal

and in the trip down the river, several of their barges and some men were lost and only a small fraction of the coal mined ever saw the market. Under these conditions, competition with the other fields such as the Lehigh and Schuylkill mines was impossible and the attempt was abandoned.

Not to be overcome by these obstacles, the Wurts brothers sought another outlet for their product



Loaded Trip Ascending Plane

and while ranging the hills east of Carbondale, discovered that New York was nearer, as the crow flies, then Philadelphia. Also, New York had no direct access to the coal fields and they felt that this was their golden opportunity. During the winter of 1822, the brothers made maps and surveyed the best possible means of outlet to this new region; and in March, 1823, they decided that by means of a waterway connecting the many streams flowing from the base of the hills east of Carbondale, and by a railroad extending over these hills, the project had a great commercial possibility. To this end, therefore, they obtained from the Pennsylvania legislature the necessary acts which permitted them to canalize the Lackawaxen River from Honesdale and armed with these plans and permissions, they sought the help of the New York financiers. The plans included the construction of a railroad from Carbondale to Honesdale over a ridge 858 feet above Carbondale on the west and 950 feet above Honesdale to the eastward; the canalizing of the Lackawaxen River from Honesdale to the Delaware and a short stretch of that river as well, and then the building of another canal from the Delaware to the Hudson.

The fact that they possessed the rights to canalize these rivers in Pennsylvania gave them some-

(Continued on page 172)

spread evenly on the platform. On this the required amount of cement is dumped and spread evenly. The cement and sand are then turned over thoroughly with square pointed shovels until all gray streaks have disappeared. The required quantity of pebbles is then placed on top and the shoveling is resumed until all are thoroughly mixed. When this is done the material is shoveled into a pile and a hole made in the center into which the water is poured slowly. The whole is shoveled all the while to obtain uniform wetness.

The concrete should then be placed as soon as possible. When placed in forms it should be tamped and spaded to cause it to settle thoroughly. The surface of a floor or walk should be finished with a wood float. A metal trowel should be used sparingly if at all, for it tends to bring a film of cement to the surface. This film lacks the wearing qualities of cement and sand combined and is likely to develop hair cracks.

If concrete is exposed to the sun and wind before it has hardened properly much of the necessary water will evaporate. Floors, walks, etc., can be protected by covering with moist earth or straw. During summer this covering should be kept moist for ten days or so.

# Up Hill and Down Dale (Continued from page 167)

thing with which to approach the New York financial interests, who gave them support enough to enable them to receive a charter from the New York State legislature to establish the Delaware and Hudson Canal Company in 1823. That same year, Benjamin Wright, who had been chief engineer of the Erie Canal, was engaged to survey the proposed system and to make an estimate of the cost. Originally, this cost was put at \$1,300,-000 and was based on essentially the same plans as those of the Wurts brothers. Further legislation by the state of Pennsylvania authorized the holdings of the Wurts brothers to be acquired by the Delaware and Hudson Canal Company and from this time on, we lose all track of the men whose enterprise had founded such a great business. In 1825 subscription books were opened in New York for the sale of stock and a capital stock of \$1,500,000 was easily over-subscribed. Early in March of that year, the first board of managers met in the Tontine Coffee House in New York where the board of directors, consisting of thirteen men, was elected. A few days later, Philip Hone was elected the first president, with John Bolton, treasurer.

The fact that Philip Hone, of old lineage and much respected in both financial and social circles, had been chosen president of the new company, gave it much prestige, and business prospered. In order to give the new company a New York office, \$500,000 of the capital stock was utilized in establishing a banking institution with offices at 13 Wall Street. This bank was maintained until the expiration of its charter in 1844, and it is of note now because it was erected on that ground just east of Nassau Street on Wall Street, opposite to the present site of the J. P. Morgan building and on the ground of the present sub-treasury.

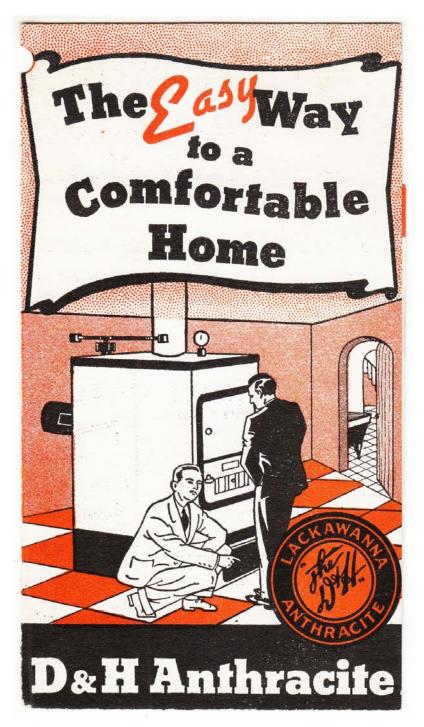
During 1826, it became apparent that the original estimate of Mr. Wright was insufficient and the legislature granted a further issue of \$500,000 and in 1829, another issue of \$300,000, both loans paying interest at five per cent. These loans were easily paid on their maturities in 1848 and 1850.

The canal which was constructed from the Hudson River to Honesdale remained the same during the entire operation of the system. It was begun in April, 1827, and was completed over its 108 miles of length in the late autumn of 1828. Honesdale was at an altitude of 985 feet above the sea, and the canal from here went through Hawley to Lackawaxen on the Delaware River and then utilized this river to Port Jervis, where it branched off again to the eastward through Ellenville to Rondout, near Kingston, on the Hudson River. It was described by a contemporary writer as being "from thirty-two to thirty-six feet in width at the water line and of a depth of four feet. The locks by which the level of the water is changed are seventy-five feet in length and nine feet wide in order to contain the canal boats which hold about thirty tons of coal." In later times the canal was slightly enlarged to carry canal boats holding some hundred tons of coal each.

Traffic on the canal was not entirely restricted to the carrying of coal alone. As early as 1830, records show that it transported merchandise, cement, lumber, cordwood and other miscellaneous articles not only for commercial uses but also for use of the farmers through whose territory the canal passed. Passenger traffic was begun almost immediately, and advertisements in newspapers of the day show that passengers might go from Honesdale to Kingston or vice versa three times a week at a tariff rate of \$4.00 for the trip or at five cents a mile for any fraction.

(To be continued)

Before we focus on the mining of anthracite coal, let's take a look at an interesting promotional flyer on the use of D&H anthracite as a fuel for home heating. This flyer in the collection of the Carbondale Historical Society.



Virtues of anthracite coal as fuel:

- high heat value
- smokeless
- gives off heat at a uniform rate
- clean
- safe
- does not become pasty in burning
- needs little attention
- lends itself to easy draft regulation
- produces little ash if properly prepared and used

# BURN D&H LATHRACITE

and Follow This Simple Method of Efficient Heater Operation



D&H Anthracite has long been recognized as the most dependable homeheating fuel obtainable. Its guaranteed purity, accurate sizing and ease of regulation have made it a favorite among householders everywhere.

# **CLEAN OUT DOORS**

Heating surfaces should be clean to utilize all the heat in the coal. Have your heater cleaned once a year.

# **COAL DOOR SLIDE**

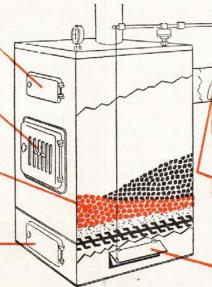
Open slide slightly to permit air to pass over fuel bed, converting gases to useful heat,

#### RED SPOT FIRING

Pull red coals forward to bottom level of the feed door. This "red spot" ignites the gases coming from fresh coal.

# KEEP ASH PIT CLEAN

A clean ash pit improves the draft and lengthens the life of the grates. Remove ashes daily.



# CHECK DAMPER

Checks fire when open. Automatic regulation may be had by installing a D&H Heat Regulator.

#### TURN DAMPER

Determine correct position by experiment. Most efficient when nearly closed.

## ASH PIT DAMPER

Increases burning speed when open.

# Regulating a D & H Anthracite Fire is Easy

Proper firing requires a "red spot" in the fuel bed, preferably just inside the feed door. This is especially true with Buckwheat and Pea coal. The live coals left uncovered ignite the gases coming from the fresh coal placed in the hollow space in the rear of the fire bed. When burning the larger sizes of coal, a deep bed produces best results.

The turn, or smoke pipe damper, should be kept nearly closed at all times. Regulate the speed of burning with check and ash pit dampers. When you need a quick hot fire, close the check and open the ash pit damper. It is no trouble to keep the fire overnight. Just add a good charge of D & H Anthracite

before retiring. Close the ash pit damper and open the check damper. In the morning, you'll find a bed of glowing coals and a warm, cozy home. D&H Anthracite requires no poking and little shaking. Ordinarily a gentle shaking of the grates in the morning is sufficient for twenty-four hours—and for fuel economy, stop shaking when a red glow appears in the ash pit. A thin layer of ash on the grates protects them from injury.

Be sure you are using the correct size of coal for your furnace—we'll be glad to give you this information. If you have difficulty regulating your heater or heating your home, call us.



# TACK THIS CARD NEAR YOUR FURNACE

# BENSON BROS.

Coal — Gen. Trucking

Phone: 88-R-2

Susquehanna, Pa.



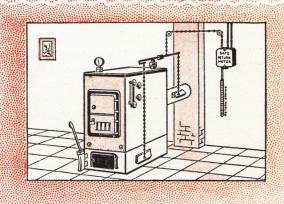
BURN D&H ANTHRACITE ... The Solid Fuel for Solid Comfort

Due to the slow rate of combustion and the short flame resulting, wide shallow fireboxes and large grate areas are necessary to burn anthracite in locomotives. The D&H used as much as 75% anthracite (buckwheat) and 25% bituminous coal. Other railroads nearly reversed those ratios.



Regulator to your present heating plant, you can have greater comfort, convenience, and economy than ever before. It reduces fuel bills because overheating of your home with its consequent fuel waste is eliminated. It also saves many steps since it brings control of your heater right into your living room. The D&H Heat Regulator is fully guaranteed both as to performance and workmanship. Yet the cost is surprisingly low. Ask us for details.





1703

# **The Mining of Anthracite Coal**

Given the rich deposits of coal in northeastern Pennsylvania owned by the Delaware and Hudson Canal Company, we will now take a look at the several kinds of mining operations that can be put into practice in order to extract the coal from the earth. As we do so, it is important to remember that the anthracite canals were among the most heavily capitalized privately-owned corporations in the United States prior to the mid-nineteenth century. The vertically-integrated Delaware & Hudson Canal Company (and the Lehigh Coal and Navigation Company) enjoyed significant legal advantages over their competitors. Both companies were legally permitted to own coal estates, which allowed them to mine, transport, and sell their own coal. As a result, both of those companies were the two largest mining companies in the anthracite region.

For an excellent account of anthracite mining and the working conditions in the mines in the nineteenth century, see *The Kingdom of Coal* by Donald L. Miler and Richard E. Sharpless (Philadelphia, 1985), especially the fourth chapter, "Working in the Black Hell," pp. 83-134.

An anthracite mine, as a work place, is a unique environment. Maude Thomas, in her book, *Sing in the Dark, A Story of the Welsh in Pennsylvania*, reminds us that smell of an anthracite mine is unlike any other. In speaking about Huw in the weeks before the eisteddfod, she writes:

"The darkness of the mine seemed brighter to Huw during the weeks before the Eisteddfod. Even the smells of the pit seemed intoxicating; the blend of odors: coal tar, pit timbers, coal dust, fungus, mule dirt, blasting powder, old lunches, the sweat of the workers and the oil of their lamps stirred strange, powerful emotions. Huw would draw a deep breath as he went down, then let it out slowly in the music of his song. / 'The people that walk in darkness,' he sang, 'sall see a great light.' "(pp. 146-47)

The mining of anthracite coal in the nineteenth century was largely an unregulated industry. Restrictions as to who could and who could not work in the mines did not come into effect until the twentieth century. In the 1916 Annual Report of the Department of Mines, we read:

Article XXXV **Employment of Minors.** Section 640. No minor under fourteen years of age and no female of any age shall be permitted to work in or about the outside operations of any mine or colliery, and no minor under the age of sixteen years and no female of any age shall be employed or permitted to work inside any mine. This section does not prohibit the employment of females over fourteen years in office or clerical work at a colliery subject to the existing laws regulating the employment of females."

Here are two mining post cards in the holdings of the Carbondale D&H Transportation Museum.



Tunnel Entrance at Coal Mine



A Happy Lot, Miners Returning from Work

To work in a coal mine requires special machinery. That equipment was either made by the mining companies themselves or purchased locally. A wide variety of mining machinery was available for purchase at The Carbondale Steam Foundry. Here is there ad from the *Carbondale Transcript, and Lackawanna Journal* of November 14, 1856:

# Steam Foundry.

THE undersigned, Proprietors of this old and well known establishment, have within the past year extensively repaired and refitted it and have increased their facilities for doing work and filling Orders that they may be favored with. CASTINGS of every description in Iron or Brass furnished promptly. They have on hand a large assortment of Patterns for all kinds of Mill Gearing, Water Wheels, &c.

They are also prepared to make contracts for Coal Breakers, Coal Cars, and Mining Machinery generally,

and from their long practical experience they flatter themselves that their work will compare favorably with that of any other establishment of the kind in the country. They would further say that by their connection with DICKSON & CO. of Scranton, they are prepared to furnish

at short notice and upon the most reasonable terms. They also continue to manufacture, PLOUGHS and STOVES of all kinds, and are, now preparing to furnish several new patterns of Coal Stoves, adapted to this section. They also manufacture, and have on hand a large and well assorted stock of Tin and Sheet Iron Ware:

Plumbing, Jobbing, Roofing, and Furnace Work of every description, done with promptness and despatch. J. BENJAMIN & CO.

August 1856.

prepared to make contracts for Coal Breakers, Coal Cars, and Mining Machinery generally,

"They are also

Carbondale Transcript, and Lackawanna Journal, November 14, 1856, p. 4:

Mine supplies, including safety lamps, and heavy hardware were available, from among many suppliers, at Hunt Brothers, Scranton, PA. Here is their ad from the September 28, 1872 issue of the *Carbondale Advance* (p. 4):



Carbondale Advance, September 28, 1872, p. 4:

1704

# **Types of Mine Openings**

Various methods are employed to reach and mine coal, depending upon the physical characteristics and conditions of the seams of coal, such as depth of beds below the surface, degree of inclination of the coal measures, and topography of adjacent surface.

In the industry's earliest days, mining was essentially the quarrying of exposed surface outcrops. This system did not require skilled miners, since the seam was mined directly from the surface. It was often necessary to remove some topsoil and overburden, but the coal was never far from the surface. Open-pit mining was low risk, required little capital, and was individualistic, well suited for a gold-rush type of entrepreneur.

For many years it did not seem that the sinking of deep shafts would become necessary. As a matter of fact, the presence of beds of anthracite at considerable depths below the surface was unsuspected, as the outcroppings on the hillsides were the only evidence of coal being present.

When it was no longer possible to secure coal from a given outcrop, a small pit was sunk to a depth of from thirty to forty feet, from which the coal was brought to the surface by means of a windlass worked by hand. When the coal and the water which had accumulated in the opening could no longer be safely or economically brought to the surface by this method, the pit was abandoned and new one started elsewhere.

In the early process of mining, there was no powder used. It was all done with the pick and wedge.

In 1818, John Flannigan used blasting powder.

Here is the very detailed and interesting description of the use of black powder in loosening coal in mines that is presented in the biographical portrait of James Morpeth (born at Wyoming, Luzerne County, November 18, 1865; retired June 1, 1937) that is presented in the April 1, 1938 issue of *The Delaware and Hudson Railroad Bulletin*, pp. 51-52:

"Before dynamite was developed, black powder was used to blast coal loose from the veins in the mines, an operation which required great skill and extreme care on the part of the miner, says James Morpeth, retired veteran of 63 years' service with the Delaware and Hudson. After a hole had been driven into the rock and coal with sledge hammers and 5- to 6-foot 'jumper drills,' the miner made his own black powder cartridge. A sheet of heavy paper was rolled into a tube the size of the drill hole and one end was folded shut. This end, and the overlapping edge of the paper along the length of the tube, were sealed with 'miner's soap,' paste in cake form. The proper amount of black powder was then measured out of the keg and poured into the tube. One

end of a blasting barrel, a long, metal pipe, was inserted in the open end; of the cartridge, which was then tied shut. / Next, the cartridge was pushed into the drill hole and gravel and dirt were tamped tightly in around the blasting barrel, one end of which protruded from the hole. These preparations completed, the charge was then fired with a 'squib,' a cloth container, about four inches long and 3/8-inch in diameter, filled with powder. The miner bit off one end to expose the powder and inserted it in the blasting barrel. The other end was then ignited in the flame of the miner's oil lamp. When the powder caught fire the squib was repelled or 'kicked' back through the tube after the manner of a sky rocket. / Great care had to be exercised to prevent accidents in blasting operations. Each miner and laborer wore an oil lamp on his cap from which dropped flaming bits of wick and drops of oil. To avoid premature explosions while powder was being transferred from keg to cartridge, workmen were instructed to remove their lamps and set them to one side. Failure to observe this precaution resulted in many fatalities among miners and laborers."

We will now take a look at several different kinds of underground mines:

1705

# **Drifts**

Where the coal seam outcrops/is exposed on a hillside or in a gulley, miners drove tunnels directly into the coal vein at a slight upward inclination to permit of natural drainage. Such an opening is known as a *drift*. In most cases, artificial support, by means of timbering, is not necessary to keep such a passageway open.

Outcrops were frequently on both sides of the valleys, which is where many collieries were located.

At first the coal was removed from drift mines in wheelbarrows, but as the workings penetrated deeper into the coal bed, tracks were laid on which cars were hauled by horses or mules, and sometimes by oxen.

The drift opening is one of the earliest and cheapest methods of developing a mine. The drift method can only be used where the coal beds slopes upward from the adjacent surface and the uppermost beds have been worked since the earliest days of the industry.

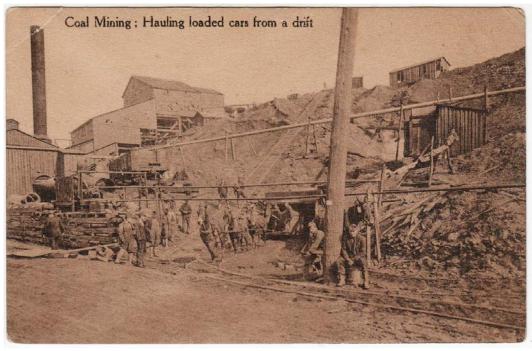
Drift mining remained a relatively simple operation, without any need for elaborate and expensive pumping of groundwater. A variation on the drift mine was the tunnel mine, which also accessed the coal vein by means of a nearly horizontal entryway that ran into a hillside. The

tunnel differed from the drift in that it was driven into rock at right angles to the vein, which it intercepted deep within the earth. Headings were then driven, at right angles to the gangway, into the seam. This method required that the miner burrow through the rock not containing coal to reach the seam, introducing an additional phase of labor, called "dead work," that produced no marketable product. Tunnelling, like drifting, was generally done above the water table.

A *tunnel* is typically open at both ends. In mining practice, this term is applied to an opening driven horizontally, or nearly so, through beds of rock and coal, with only one, or no opening to the surface. As the tunnel penetrates the coal beds, other passageways are driven from it, usually at a slight inclination to facilitate the movement of loaded cars. Tunnels are sometimes driven entirely in rock from one bed of coal to another for transportation or drainage purposes. This type of excavation is expensive as no revenue-producing coal is recovered during the progress of the work.

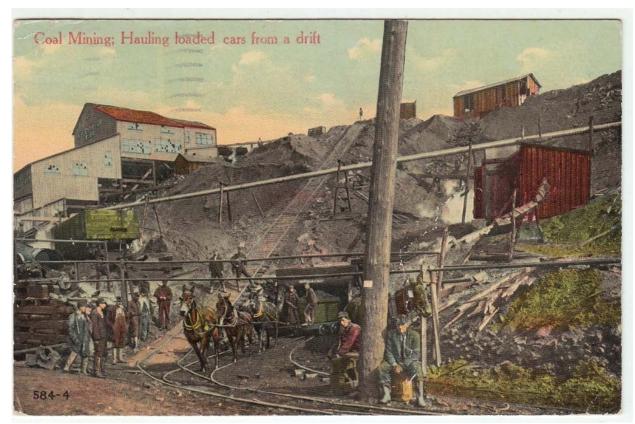
Drifting and tunneling demanded a substantially different level of knowledge and skill from the miner (than open-pit mining). They also demanded a substantially greater capital investment than surface mining (wood bracing was necessary to ensure that emptied seams did not collapse, for example).

Shown below is post card titled "Coal Mining; Hauling loaded cars from a drift." Post card in the collection of the Carbondale D&H Transportation Museum.



"Coal Mining; Hauling loaded cars from a drift"

Here is a very well executed colorized version of the post card shown above. Post card in the collection of the Carbondale D&H Transportation Museum:



"Coal Mining; Hauling loaded cars from a drift"

1706

# **Slopes**

As the more obvious and advantageous seams above the watertable became exhausted in the mid-1830s, *slope mining* became increasingly prevalent.

A slope may driven from the outcrop (the surface) in the coal bed itself, following a downward course. Slopes are sometimes driven partly through soil, partly through rock and may penetrate several beds of coal. Occasionally a slope is driven entirely in rock and is then known as a rock slope. Slopes are also driven entirely within the mines, with no direct opening to the surface and follow the floor of the coal bed downward.

Slope mining was similar to drift mining, except that the tunnel followed the seam down, below the watertable, thus necessitating expensive pumping systems to remove groundwater from the works. Gangways were periodically driven at right angles to the slope, providing access to the entire seam.

The depth of early slope mines, once below the water table, was limited by the lifting capacity of the pumps. As more water had to be pumped from greater depths, more powerful pumping engines were required. Slope mining was significantly more expensive than open-pit mining and drift mining, and required, again, a higher level of skill and planning.

A wonderful description of slope mining, in the Mill Creek (Hudson) slope, is given in the biographical portrait of James J. Barrett ("Sixty-Three Years' Service") that was published in the May 15, 1932 issue of *The Delaware and Hudson Company Bulletin*, pp. 147-148, 158), as follows:

"In 1868, after eight years as a slate picker, James [J. Barrett] entered The Delaware and Hudson Canal Company's employ in the Coal Department, driving a mule on the Mill Creek (Hudson) slope for \$1.15 per day. A slope, in anthracite mining parlance, is an inclined entrance to an operation near the surface of the ground, through which empty cars are taken into the mine and coal is removed. James drove his mule, or team of two mules, down the slope in the morning, through the maze of tunnels to the chambers in which the miners were working, and pulled the loaded cars to the foot of the slope, from which point they were drawn out by means of a steel cable and a stationary engine. He hauled the empty cars from the foot of the incline back to the chambers for loading. When the day's work was over, late in the afternoon, the mules were driven out of the slope and into a barn close by the entrance, where they were housed until the following day. / James's next job was tending the foot of a plane at the Mill Creek breaker. He was stationed at the point where the loaded cars were attached to a cable to be hoisted to the top of the breaker for dumping into the chute which led to the coal crushing apparatus. Empty cars returning from the breaker were then hooked to the cable for their short run back to the slope entrance, where they were attached to another cable for their descent into the mine. / While he was thus employed a law was passed forbidding employes to ride up the slope, and it was therefore necessary to station a man at the entrance, and another at the foot of the slope to couple and uncouple cars. James was then transferred to the station at the head of the slope. As a train of five loaded cars appeared out of the blackness of the tunnel he would seize the hook which fitted into the cone in the cable, disengage it with a snap of his wrist, and permit the cars to run to the breaker by gravity. Empty cars going back were coupled to the cable to let them down into the workings at retarded speed. / After two years outside the mine James went to work underground as a miner's helper. The miner placed the charges of dynamite in his chamber to loosen the coal, which the laborer then transferred into the empty cars standing nearby. Although it was hard work picking up the huge lumps of coal from where they fell and dumping them into the two-ton

cars, seven cars had to be filled before the day's work was done, the elapsed time usually varying between six and eight hours." (Biographical portrait of James J. Barrett, "Sixty-Three Years' Service," pp. 147-148, 158, May 15, 1932 issue of *The Delaware and Hudson Company Bulletin*)

In describing his working experiences for the Delaware and Hudson Canal Company at the head of a slope at the Mill Creek breaker, about 1884, Elmer E. Dilts provides very interesting details on the proper working of a mine slope. From his biographical portrait that was published in the April 1, 1934 issue of *The Delaware and Hudson Railroad Bulletin* (pp. 51-52), we learn what Dilts had to do in order to perform his job correctly. From that portrait we learn that Dilts

"... was stationed at the head of a slope, it being his duty to uncouple loaded cars from the cable as they broke over the top, and to attach the cable to descending trains of empties. Unlike the Delaware and Hudson Gravity system, which used an endless cable with cones at intervals for the insertion of a hook, the slope had a single strand of rope wound around a drum operated by a stationary engine. The cable ended in a clevis which was secured to the link at the end of the car by means of a pin. / When a train reached the top of the incline, Elmer would stand between the rails; when the first car reached him he jumped on, snapped the pin out when the engineer slacked, and then threw the cable clear of the rails so it would not derail the cars. Should he be unable to pull the pin, as sometimes happened, the engineer had to stop his engine immediately or the cars would be demolished against the drum. As soon as the loaded trip was 'in the clear,' a string of empties was run toward the slope and he had to attach the cable 'on the run.' If he missed the coupling the cars would rush down the slope and disappear into the blackness of the tunnel while Elmer [born on May 9, 1862 at Lake Ariel; moved to Hudson, with his mother, in 1872, shortly after the death of his father, who had been employed on the Pennsylvania's Gravity Railroad] fervently prayed that the 'devil catcher' was on the job."

In the biographical portrait of Elmer E. Dilts given above, we read about the "devil-catcher":

"If he missed the coupling the cars would rush down the slope and disappear into the blackness of the tunnel while Elmer fervently prayed that the 'devil catcher' was on the job."

Dilts defines the "devil catcher" as follows:

"About 200 yards below the surface of the ground, down the 'slope' up which loaded cars of anthracite were hauled from the workings to the breaker fifty years ago, was the 'devil catcher.' His sole duty was to operate a de-rail, which he placed over the track behind an ascending string of cars and kept there until the train was safely over the top of the plane. A few minutes later a

'trip' of empties would be lowered. If they descended slowly, apparently securely held by the cable, all was well; however, should a string of runaways come hurtling down the black slide, he closed the derail, leaped to the comparative safety of his shanty, set in a niche cut in the tunnel wall, and heard the crash of the cars as they were shattered to kindling in the passageway. Should a string continue uninterrupted down the slope, which descended on a steep grade for half a mile, the runaway might cause serious damage to persons and property before being dashed to pieces down in the depths of the earth." (p. 51)

James Morpeth worked as a slope runner in a D&H mine, a job that he described as the most dangerous job he ever had. In his biographical portrait in *The Delaware and Hudson Railroad Bulletin*, April 1, 1938, pp. 51-52, we read:

"The most dangerous job Mr. Morpeth ever had was that of 'slope runner'—hitching loaded cars to the cable for hoisting up the 3/4-mile long slope and releasing empties that returned. As there was no way of signaling the engineer at the head of the slope, the runner had to uncouple the empties and hook onto the string of loads in the short interval while the cable was slack. If cars became derailed while ascending or descending the long plane they were usually demolished before anyone knew anything was wrong."

# **Slopes and Planes:**

A *plane* is similar to a slope in the interior of a mine, except that it is driven upward in the coal bed itself, or through rock, as a main artery of transportation from one part of a mine to another. The term *plane* is usually applied to a transportation road down which the loaded cars travel, in contradistinction to a slope up which the loaded mine cars are hauled. Mine cars are moved on slopes and planes by heavy cables or ropes, operated mechanically.

In the biographical portrait, with photo, of Frank S. Clark that was published in the September 1, 1936 issue of *The Delaware and Hudson Railroad Bulletin*, pp. 131-132, there is very good information about underground "gravity" planes at the Laurel Run Colliery in Wilkes-Barre:

"RAN UNDERGROUND PLANE / Retired Parsons Engineer Began 58-year Service on Mine Road / The fact that the Delaware and Hudson's first railroad, which crossed the mountains between the anthracite mines in the Lackawanna Valley and the canal at Honesdale, PA., was for the most part gravity operated, is more or less common knowledge. That an underground gravity railroad system was in use by the company in the mines at the same time is not so generally known. / FRANK S. CLARK, veteran of 58 years' service with the Company, 'ran' an underground gravity plane in the mines at Laurel Run (Wilkes-Barre) Colliery, back in

the seventies. The gravity system was used to replace the loaded cars in mining chambers above the main tunnel with empties to be filled. When three cars had been loaded in the chamber a steel rope was run from the last car of the string, around a sheave equipped with a brake drum and lever, to three empty cars at the bottom of the underground plane. By removing the sprag which blocked the front wheel of the loaded string, the loads were started down the plane, their weight pulling up the three empties. By the hand brake lever the movement of the two 'trains' could be controlled until the empties were 'spotted' and stopped at the top of the plane, the loaded cars being hauled out of the mine by mule-power. . ." (p. 131)

Additional very interesting mining/railroad career information about Frank Clark is given in his biographical portrait, as follows:

"MR. CLARK, who was born at Waymart, Pa., a station of the Carbondale-Honesdale Gravity Railroad, June 14, 1862, entered the Delaware and Hudson Canal Company's employ, in the Coal Department at Laurel Run Colliery, at the age of 11, as a 'breaker boy' or 'slate picker.' Less than a year later he was given the task of 'oiling the breaker'--lubricating the big rollers which crushed the 'run of mine' coal, the cogs, cable- and belt-wheels which connected the rest of the machinery with the steam engine which drove it. . . / In the thirteen years he spent in the Coal Department he served, in addition, as ventilating door tender down in the mines; as the driver of the mules which hauled the empty and loaded mine cars in and out of the workings; and finally as a 'runner' on the slope leading from the mines to the surface. On the last mentioned job, it was his duty to ride the empty cars as they were lowered by cable from the outside stationary engine house to the various 'levels' and 'drifts' underground and to attach the cable to loaded cars to be hoisted up the slope to the surface. Communication between the 'runner' and the stationary engineer was maintained by bell-cord signals, a device long since replaced by electronically-operated signals." (pp. 131-32)

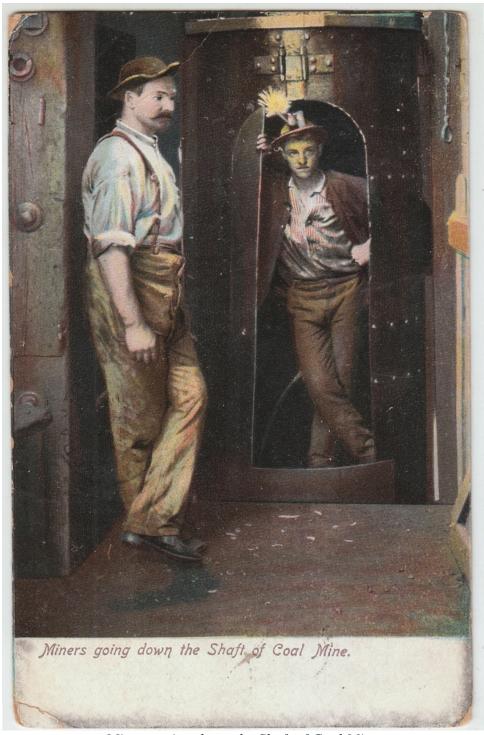
1707

# **Shafts**

By far, the largest proportion of anthracite output is brought to the surface by means of shafts. A shaft is a vertical opening from the surface, penetrating one or more coal beds and intervening rock strata.

One shaft in the anthracite region attained a depth of more than 1,800 feet, but the majority were much shorter.

Post card, titled "Miners going down the Shaft of Coal Mine," in the collection of the Carbondale D&H Transportation Museum:



Miners going down the Shaft of Coal Mine

# Back of post card shown above:



A shaft is usually divided into two or more compartments. A typical shaft has two hoistways: one through which the loaded mine cars are brought to the surface on cages; the other in which empty cars are lowered in the same manner.

A shaft cage consists essentially of a platform with an iron guard rail and a steel canopy, the latter affording protection against debris or other objects which might fall as men are lowered or raised in the shaft. When anthracite is being hoisted in a shaft, empty cars are lowered in one compartment as the loaded cars are raised in the other. A typical shaft has a third compartment up which air is pumped from the workings. A small adjoining compartment is also provided for pipe lines, signal lines, electric cable, etc. Safety devices are provided to prevent the cage from falling in the event of failure of the hoisting cables.

Most of the anthracite mine shafts were lined with timber. At the head of the shaft, a substantial derrick or tower was erected. Atop the tower, large, grooved sheave wheels were placed, over which run the strong wire cables attached to the cages. Motive power for the cages was furnished by steam or electric engines located in an adjacent building.

When a shaft penetrated a number of coal beds, as was usual in the anthracite region, several landings were provided between the top and the bottom of the shaft from which the coal was hoisted in cars to the surface. At the bottom of most shafts was a reservoir, or sump, into which mine water was drained from the workings and then pumped in pipes up the shaft to the surface.

As the revolution in the iron industry made powerful steam lifting and pumping engines available to mine operators, vertical shaft mines were developed to reach veins deep beneath the surface. Once the shaft reached the vein, horizontal gangways were driven off the shaft into the vein, which was often worked using slope or drift mining methods. Steam powered lifts hauled miners and equipment up the shaft, and brought the extracted coal to the surface. Shaft mines were not widely employed until the late 1850s, after the required lifting and pumping technologies had become available.

#### **Shaft Sinkers:**

Alexander Bryden and Archibald Law, two very prominent nineteenth-century Carbondaleans who worked for the D&H, were shaft sinkers.

In September 1899, P. S. Joslin contributed a series of articles to the *Carbondale Leader* on the early history of Carbondale. In the article in that series titled "CARBONDALE IN ITS I[N]FANCY. / A Series of Articles on the Early Days of the Anthracite City by One of Its Pioneers," published on September 16, 1899, p. 2, Joslin presents biographical sketches of Alexander Bryden and John Hosie, co-superintendents of the D&H mines. Here is P. S. Joslin's biographical portrait of Alexander Bryden:

"Alexander Bryden was born in Daily Parish, Ayrshire, Scotland March 6, 1799. He was brought up about the coal mines of Ayrshire and became a coal miner, shaft sinker and mine foreman. / In the year 1836 he leased a coal work upon the Polquhirter estate at New Cumrock, Ayrshire. He also leased a coal work upon the Downieston estate, at Patna, which was drowned out by the River Doon breaking into it. / In the year 1842 he emigrated to America, and came direct to Carbondale. In July of that year, work was very dull, and hard to get about the mines, and he took such work as he could get. His first work for the Delaware & Hudson Canal company was with Hugh Brown, foreman of day laborers, but very soon he was given charge of the pumps which drained the water from the deep mines. / In March 1843, he was appointed mine foreman, to take the place of Archibald Law, who was permanently disabled by a fall of roof and coal."

Alexander Bryden was the hero of the Carbondale 1846 mine cave in rescue efforts, and much is written about him in Volume III in this D&H: *The 1845 Configuration of the D. & H. Gravity Railroad.* 

In Part 4 of P. S. Joslin's series of articles on the early days of Carbondale that was published in the *Carbondale Leader* in 1899 (*CARBONDALE IN ITS INFANCY / A Series of Articles on the Early Days of The Anthracite City by One of Its Pioneers*, Part 4, *Carbondale Leader*, August 26, 1899, p. 6), we read the following about Archibald Law: "A. F. LAW / Archibald F. Law came from Scotland in the spring of 1830, his family following in 1831. He first went to Pottsville, but

finding no underground mining, he came to Carbondale. As it was dense wilderness between Pottsville and Wilkes-Barre, he reached Carbondale by way of Philadelphia, New York, Rondout and the D&H Canal. He was first employed as coal inspector, but soon after assumed the charge of the original underground mine with cars and track, probably the first in use in the state. He was mine superintendent for the Delaware & Hudson canal Co. from 1832 to February, 1843, when he was so severely injured by a fall of coal that his lower limbs were totally paralyzed. / He was elected justice of the peace in 1846 and served until his death in June, 1848 at the age of 48 years. / He expressed the opinion as early as 1836, that Wilkes-Barre would be the great centre of the anthracite coal trade, for the greatest deposit was at that end of the coal basin. He also thought that the best way to take the coal to market from the upper Lackawanna valley would be to tunnel the mountain at some place above the Morss tannery to the head of the Lackawaxen, and then have a down grade to tide water. This idea is now occupying the thought of both the D. & H. company and the Erie company. / Mr. Law was survived by his wife and five children. John S. in connection with John Howell, opened the largest dry goods store up to that time in the city. It was burned, and they did not rebuild, as the villages of Archbald and Olyphant were springing up, which diverted the trade that had been before coming into town from that direction. The same firm afterward went to Pittston, where they did business for many years. From Pittston Mr. Law went to Wilkes-Barre, to take charge of the works of the Dickson Manufacturing company located there. From there he moved to New York where he died. / Charles, the second son is living in Pittston, where he has lived for many years and for several years past has been sales agent for the Hendrick Manufacturing company. / Of his daughters, Ann married Andrew Bryden of Pittston. She died in 1855. Marian married Tempest Howarth, Margaret the youngest married John Cosgrove, who was killed in the mines at Pittston. She still lives in Pittston."

On September 1, 2009, Malcolm Law (7686 Forrestal Road, San Diego, CA 92120) sent the following message to the author:

"I am the great-great grandson of Archbald Law born in Wanlockhead, Scotland in 1799. In Scotland he trained and worked as a mining engineer. In 1830, he emmigrated to the United States and settled in Carbondale, Pa. and was employed by the Delaware and Hudson Coal Company as a mining engineer. Mr. Law put in the first underground mines for the D&H Coal Company replacing strip mining then in vogue with a vertical shaft [emphasis added]. During an inspection of mine pumps Mr. Law was injured by a fall of rock leaving him in considerable pain and with paralysis of his lower limbs. Mr. John Wurtz, President of the D&H Coal Company called to see him and had a wagon especially built for him and had him transported to New York City to see Dr. Valentine Mott. Unfortunately Dr. Mott was unable to relieve him of his pain and suffering. Mr. Law died in June 1848. Mr. Law's innovative engineering transforming anthracite mining methods was commemorated with a monument located in Carbondale on the occasion of the fiftieth anniversary of the city of Carbondale."

In 1901 a monument was erected in Carbondale by the D&H on the site of the first deep underground anthracite shaft mine opened in America. Archibald Law was the D&H mining engineer under whose supervision that mine was opened, in Carbondale, in June 1831. Here are two photographs of that monument in its original 1901 position, just west of the D&H Seventh Avenue crossing.

First underground mine monument



Photo of the First Underground Mine Monument, in its original location, just west of the Seventh Avenue D&H Crossing, Carbondale. Photo given to the Carbondale Historical Society by Bob Vandenberg, Carbondale.

Here is a photograph of the first underground mine monument that is given on page 24 of *Geography and History of Northeastern Pennsylvania* by A. F. Stokes, formerly editor-in-chief, International Correspondence Schools, Scranton, Pa., 1936"



Site of First Deep Underground Anthracite shaft mine in America D&H Seventh Avenue Station, Carbondale

Geography and History of Northeastern Pennsylvania by A. F. Stokes, p. 24

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The text on the plaque attached to the monument shown above is as follows:

The
D&H
The First
Underground Anthracite
Mine Opened Here
June 1831.
By Archbald Law
First Mining Engineer

The Delaware and Hudson Canal Company John Wurtz, Pres. John P. Williams, Treas.

Of

Officers of

The Delaware and Hudson Company 1901.

Robt. M. Olyphant, Pres.

F. M. Olyphant, Secty.

C. A. Walker, Treas.

C. C. Rose, Supt. Coal Dept.

Erected 1901

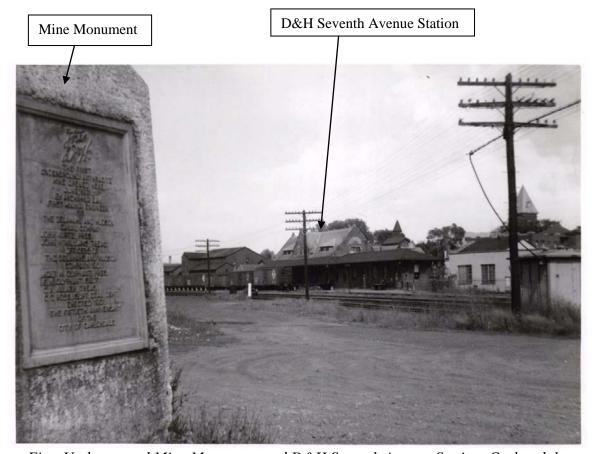
The Fiftieth Anniversary

Of the

The Fiftieth Anniversary
Of the

City of Carbondale.

Here is a photograph of the First Underground Mine Monument in Carbondale that was added to the archives of the Carbondale D&H Transportation Museum on July 18, 2017, courtesy of John V. Buberniak:



First Underground Mine Monument and D&H Seventh Avenue Station, Carbondale

To return to our discussion of shaft mines, here are three reports on accidents in shaft mines:

1. A fire damp explosion took place at the Eddy Creek Shaft, near Olyphant, on Monday, August 8, 1870. The following article on that accident was published in the *Carbondale Advance* of August 13, 1870:

# Mine Accident at Olyphant.

A fire damp explosion occurred at Eddy Creek Shaft, near Olyphant, on Monday night of this week. It occurred about 10 o'clock, in the part of the mine where Richard Mason, John Carey and Edward Hannock, were at work, all of whom were rescued by three other men at work near by.

Hearing of the accident, the mine boss, Mr. John Pettigrew, and mule boss, Mr. Whitley, feared for the safety of the mules that were inside, and went down. Another explosion followed. Two other men then went down and found Messrs Pettigrew and Whitley lying in a car shockingly burned. They got them to the surface. But they were injured fatally, as was also Edward Hannock. Mr. Pettigrew was formerly a resident of this city.

(Carbondale Advance, August 13, 1870)

2. Mrs. John Fleming was killed when she was run over by a train near No. 1 Shaft in Carbondale on August 6 1870. The following account of the accident was published in the *Carbondale Advance* of August 13, 1870:

#### Another Fatal Accident.

An aged lady, wife of Mr. John Fleming, was run over by a train of loaded coal cars, near No. 1 Shaft, while she was walking on the track, on Saturday afternoon last. She was nearly deaf and unable to hear the approaching train. On this account all efforts to alarm her, and get her off the track, proved unavailing. She lived but about an hour.

(Carbondale Advance, August 13, 1870)

3. A fire damp explosion took place in the Pine Brook Shaft on the morning of April 8, 1872. One man was killed and two men were badly injured by the explosion. Remarkably, these three men were told by the mine boss when they came to go to work that there chamber was full of fire damp and that they should not go into it. They would not heed the warning. They entered their chamber with naked lamps, the gas exploded. Here is the account of the accident that was published in *The Morning Republican* of April 9, 1872:

The Morning Republican

Tuesday, April 9, 1872

Pine Brook Shaft.
Another Serious Accident
One Man Suffocated and Two Badly Burned.

Yesterday morning about seven o'clock, another fire damp explosion occurred at Pine Brook shaft, resulting in the death of one man and the burning of two others very badly. The names of the victims are James Stone, miner, of Scranton, face, hands and back badly burned; Patrick O'Hara, laborer, Pine Brook, badly burned; Anthony Campbell, of Pine Brook, died from the effects of inhaling the poisonous gas. The mine boss made several efforts to rescue him, but owing to the quantity of foul air in the chamber he was compelled to leave him to his fate, or else lose his own life. It appears that these men were told by the mine boss when they came to go to work that there chamber was full of fire damp, and they should not go into it. They would not heed the warning, but entered the chamber with naked lamps and as soon as the flame of the lamp came in contact with the gas it exploded, the result of which is stated above. It seems strange that men, when warned of their danger, should deliberately plunge into the very jaws of death. These men certainly knew that if there was foul air in the chamber, and they went in with naked lamps, the result would be an explosion, and they would in all probability lose their lives.

Inspector Blewitt visited the works, descended the shaft and examined the gangway and chambers as far as possible. He found the gas still burning, the brattices considerably damaged, and some of the props on fire. An investigation was held at the Inspector's office, at which many witnesses were examined. The fact that all the requirements of the ventilation law have been observed at these works, and that every precaution was taken to avoid explosions and accidents, was shown.

1708

# Early Mine Openings in Carbondale, 1829-1880

One could not hope for a better account of the early mine openings in Carbondale in the period 1829-1880 than the one that is given in *History of Luzerne Lackawanna and Wyoming Counties, PA. With Illustrations and Biographical Sketches of Some of Their Prominent Men and Pioneers,* New York, Munsell & Co., 1880. In the account given below from page 447 in that volume, we have emphasized, in bold face type, the names of specific mine features that are especially important for our purposes here.

"The first coal was mined [in Carbondale] at the foot of Davies' Plane, [now known as No. 28] from the bed of the river, by diverting the river from its channel and running a level into the hill. The coal was run out on a wheelbarrow. This was called Inghram's level. In 1829, a tunnel was driven on the opposite side of the river at old **No. 1 drift.** This drift was worked till 1857. **No. 2** drift, west of No. 1, was opened in 1830. January 12, 1846, the roof of this mine fell in over a space of half a mile long and forty rods wide. About sixty men were shut in, of whom all but fourteen succeeded in effecting their escape. The bodies of five were never recovered. No. 3 on the 'High road' drift, was opened about the same time. This was a slope and was pumped by water power up to 1838. / The 'New mine,' at the foot of Davis's back plane, was opened in 1835 and worked until 1856. No. 1 shaft, which was the first shaft put down here, was sunk in 1843. This was used for pumping water. The first rock slope in the Lackawanna valley was started at high water mark on the bank of the river, and descended to the coal at a pitch of nine and one-half degrees. Six hundred tons per day are now [1880] hauled up this slope, besides pumping the water from the mine by water power. The top vein is worked out here and the bottom is being worked. The two are separated by eighteen inches of bony coal. / Fall Brook levels 1, 2 and 3 were opened in 1846 and abandoned about 1857. The coal from these levels is worked from the 'White Bridge' tunnel and hoisted at No. 1 plane. The 'White Bridge' was begun in 1865. No. 2 shaft, near the line of Fell Township, on Coal creek, was started in 1853

and abandoned in 1861. No. 3 or 'Lookout' shaft was started at the same time in the third ward of the city. The engine house of this shaft burned May 20th, 1874, but was rebuilt the same year. Here are two Cornish bull pumps, lifting 2,700 gallons per minute a height of 74 feet. Steam was first used at shafts 2 and 3. / The Powdery tunnel, which was started in 1855, has been full of water more than five years, having filled during a miners' strike. The Powderly mine, in the south district of Carbondale township, was begun in 1845. It has three drifts, but never did much. Coal Brook rock tunnel, 800 feet long, was started at the mouth of No. 2 shaft, and is now working. Lackawanna tunnel was started in 1864 near Coal Brook breaker, and driven north to the bottom vein. Forrest tunnel, fifty feet higher, driven to the top vein, was begun in 1867 and abandoned in 1871. Valley tunnel, east of the others and working the bottom vein, was driven in 1868, and is now working. 'Breaker' slope was driven in 1869, to the bottom vein, and has been idle since 1876. Mill Ridge slope, to the top vein, driven the same year, is now being worked, as is also the 'Midland,' driven in 1873. The company has no breaker in Carbondale, and separates the coal into lump, steamer and 'breaker' coal. The last is taken to a breaker at Rackett brook, where it is prepared. This breaker [Racket Brook] was built in 1856, and rebuilt in 1868. / Coal Brook breaker, just above the depots of the railroad in the city, was erected in 1867, and is the largest in the United States. It has a capacity of 1,400 tons per day. It has no rolls, and the coal is separated by screens, the finer coal going to the Rackett Brook breaker. / About 1,200 men and boys are employed by the company at its mines here. A. H. Vandling is superintendent of coal; A. G. Nicol, general mine boss; William Bowers, outside foreman; John Campbell, mine boss at No. 1; John Hughes, mine boss at No. 3; William McMyne, mine boss at Coal Brook. About 1,600 tons per day are mined, while the mines have a capacity of 2,500 tons." (History of Luzerne Lackawanna and Wyoming Counties, PA. With Illustrations and Biographical Sketches of Some of Their Prominent Men and Pioneers, New York, Munsell & Co., 1880, p. 447)

In 1903, the book titled *Coal and a Coal Mine* by Hon. T. V. Powderly (100 Broadway, New York), see notice below, was published. We have looked for, but have not been able to locate a copy of Powderly's book, which we would very much like to see.



1709

# **General Methods of Mining Anthracite**

In coal beds in which the seams are 30 inches thick or thicker, several different methods of mining anthracite coal by hand are used. In beds in which the seams are less than 30 inches thick, the expense of removing underlying and overlying rock would be greater than the value of the coal recovered, and so in thin beds, machine mining is followed.

A very common mining method in the Northern, or Wyoming, Anthracite Field was chamber-and-pillar (sometimes called room-and-pillar) mining.

1710

### Chamber-and-Pillar

In the *Coal Miners' Pocketbook Principles, Rules, Formulas and Tables*, Eleventh Edition, McGraw-Hill Book Company, Inc., New York and London, 1916, p. 692) the excellent material presented below is given on chamber-and-pillar mining. Additional and very detailed information on "Supporting Excavations" is presented in this excellent McGraw Hill pocketbook, pp. 692-738.

"This is the method followed quite generally in the Northern or Wyoming Field, where the coal beds are comparatively flat. Passageways or gangways, which serve as the main transportation roads of the mine, are driven at intervals and split the workable area into sections. These gangways are usually made as straight as possible to avoid curves in the track and facilitate the circulation of air. They vary in height, depending on the thickness of the bed. The majority have a height of about 7 feet. Parallel with the main gangway, and about 30 feet distant, a similar passageway or airway is driven to provide a return course for the ventilating currents which enter the main gangway. The gangway and the airway are separated by a solid block of coal, penetrated at intervals of about 60 feet by crosscuts or headings to facilitate the circulation of air as the workings are advanced. Where a bed of coal lies on a considerable pitch or inclination, the gangways are driven either from tunnels, slopes, or planes, following the inclination of the seam. The miner's chamber is usually driven for a distance of from 250 to 350 feet from the main gangway or chamber. Miners' chambers (from 2 to more than 20 feet in height, according to the thickness of the coal bed) are driven at specified intervals and solid pillars of coal, generally of uniform width, are left standing between them to support the roof. These pillars are from twothirds to one-half times the width of the working place, depending upon the depth of the bed below the surface. The lower the bed the greater the weight of the overlying strata; consequently larger pillars must be provided for support. This pillar coal is not abandoned but is later recovered in secondary mining operations known as robbing (starting at the remote edges of the property and retreating toward the shaft or main transportation road to the surface, the pillars are taken, followed by collapses).

"COAL PILLARS / GENERAL CONSIDERATIONS AFFECTING SIZE OF PILLARS / Amount of Pillar Coal.—The amount of coal left in the pillars for the support of the workings is generally expressed as a percentage, or a certain portion, of the total volume of the bed within the area included by the pillars. The term *pillar coal*, therefore, includes not only the coal left in the room pillars but also that left in the pillars supporting the entries. The amount of coal left in the pillars in the first working varies widely under different conditions but the best practice now counts on ample pillars in the first working so as to minimize the danger from squeezes. Many of the collieries in the anthracite region of Pennsylvania are now extracting but one-third of the coal in the first working, leaving two-thirds of all the coal as pillars to be taken out later as the

different sections of the mine are worked up to the limit. . . / The proportion of coal left in the pillars along the entries to the amount of coal taken out in mining the entries is relatively larger than the percentage of pillar coal between the rooms, as the entry pillars usually have to stand a much longer time than the room pillars. / The amount of pillar coal left depends on the method of working the mine, on the nature of the coal, the top and the bottom, on the thickness of the coal, and the depth of cover, and on the time of drawing the pillars. / Practical Considerations Determining Size of Pillars.—It is impossible to give exact rules or formulas for determining proper size of pillars and rooms that will be universal in their application. Each mine is a special problem, and in laying out the rooms and pillars it is well to find out what is the successful practice in the same field or in similar fields worked under the same of conditions. Similar practice should not be followed blindly, as a great deal of the lack of progress in mining has been due to this copying of other methods. Still it is always well to find out how others have succeeded and why they have failed. / In general, the thicker the bed and the greater its depth below the surface, the wider must be the pillars and the narrower the opening. This rule is not invariable, however, for certain coals deteriorate very rapidly when exposed to the atmosphere and the pillars must be much larger than with hard, compact coal under similar conditions. . . : " (Coal Miners' Pocketbook Principles, Rules, Formulas and Tables, Eleventh Edition, McGraw-Hill Book Company, Inc., New York and London, 1916, p. 692). Additional and very detailed information on "Supporting Excavations" is presented in this excellent McGraw Hill pocketbook, pp. 692-738.

"When the roof and the floor are strong and unyielding and the pillars are insufficient to withstand the pressure thrown on them," we read in the *McGraw Hill Miners' Pocketbook* . . ., p. 701, "they are filled with breaks and cracks, large pieces split off, and the pillars are finally crushed into small coal and the roof comes down. This is known as a *squeeze*, *thrust*, or *crush*."

In *The Story of Anthracite*, pp. 170-172, we find the following information on squeezes:

"Squeezes": In early mining operations the maximum amount of coal was recovered in first, or chamber, mining, with the result that the remaining pillars were smaller than favored by recent mining authorities. Furthermore, the pillars were not columnized (located in vertical sequence in the various beds) but were staggered without reference to the position of pillars in overlying or underlying beds. The result has been that under long-continued pressure the pillars in some areas of old workings have weakened. To assist in supporting the weight of the overlying strata and to ease the burden on small pillars, the present-day practice is to build cogs at strategic points in the various beds, or flush the voids with silt or ashes. A cog may be briefly described as a hollow square of heavy timbers built from floor to roof, and packed as tightly as possible with rock. This serves the same purpose, although in smaller degree, as a pillar of solid coal, in providing support. 'Silting' or 'flushing' are terms used to describe the method of hydraulically filling the worked-out chambers with fine coal dust (silt) or ashes. This fine material is carried into the

open spaces to be filled, by water, through boreholes drilled from the surface. Strong barricades are erected at strategic points inside the mines, against which the flushed material backs up until the void has been completely filled. The water drains off and is pumped to the surface. The filling of fine coal dust (silt) or finely ground ashes, forms a firm, tightly packed mass, relieving the pillars of considerable weight. Compression caused by the weight of the overlying stratas is so great that, later on, passageways can be driven through the flushed material without causing it to 'run.' / Despite precautionary measures a general movement of the strata sometimes takes place, particularly in areas which have not been 'flushed,' causing many pillars to fail and the roof to collapse over a large territory. This is known as a 'squeeze.' To the extent that the average mine worker entertains any fear in connection with his employment underground, this is probably the greatest cause for anxiety. / A squeeze is really an upheaval of the floor or a sagging of the roof over an extensive area, with resultant crushing of timbers and pillars. Old time workers aver that one of the infallible signs of an impending squeeze is the exodus of rats from the workings. During the early stages of a squeeze timbers are buckled and crushed. Particles of coal are forced out of the pillars by the excessive strain. The mine worker knows these signs and hurriedly prepares to depart but sometimes the development of the movement is too rapid and the area involved too extensive for all the men in the vicinity to escape, and their retreat may be cut off by heavy falls of rock and coal in the traveling ways. Some men may be caught under the falls and crushed. When such a disaster occurs, rescue gangs are immediately organized and, in tribute to the anthracite mine workers, it may be recorded that there is no lack of volunteers for this dangerous work. Strenuous efforts are made at once to clear away the fallen rock and debris so that the affected area may be explored and a way provided for the escape of living men trapped in the workings. Sometimes seemingly miraculous escapes are reported. A man may be pinned under a tremendous weight of rock which is prevented from crushing out his life by a heavy slab wedged over him, holding back the weight and permitting some circulation of air. The rescue gangs are familiar with such possibilities and work feverishly to clear away the huge piles of fallen rock and coal. Other men, more fortunate, may be isolated in open workings behind barricades of fallen debris, and it is only a matter of time until the rescue crews have cleared away a means of exit. / One of the worst disasters of this kind occurred at Carbondale in 1846 when a roof fall, involving an area of almost fifty acres, imprisoned many men. . . " (The Story of Anthracite, pp. 170-172)

The gangways, or passageways, in these chamber-and-pillar mines, were timbered to support the roof. Off the gangways, separate chambers, known as *breasts*, were established. These breasts extended uphill into the coal vein. This allowed the coal removed from the face by the miner and his helper to move downhill, aided by gravity, to the gangway and the mine cars.

Individual breasts were separated by pillars of coal that supported the roof of the breast. Pillars varied in width from fifteen to forty feet, depending upon the character of the roof and the hardness of the coal. Individual breasts were worked upwards perhaps 80 to one hundred yards

and could produce three thousand tons of coal. A quarter mile long gangway might support as many as twenty breasts, each manned by a miner and his helper. The breasts were connected at intervals by openings known as cross headings, which also served as air passages.

Before we proceed any further in our examination of mining methods, it would be well to focus on the men who worked in the anthracite mines.

A chamber was usually worked by two men—a miner and his laborer. The miner was responsible for the safety of the chamber and the direction of the work The laborer was employed by the miner, who may hire and fire him at will. The miner is the master of his chamber. The laborer could not, by law, prepare or fire explosives. Transportation crews deliver empty cars to the miner's chamber and remove them when loaded. Under the PA Miners' Certificate Law, to become a miner, one must first be a laborer for 2 years and pass a test.

In the anthracite industry there are three classifications of miners:

1. **Contract Miner:** The contract miner worked on a piecework basis, being paid a fixed rate per mine car or mine ton of coal produced and, in some cases, a lineal yard rate. In the anthracite industry, most miners were contract miners/piece workers. The contract miners were the elite of the laboring class;

Miners' helpers were hired and paid by the miners. The helpers handled and loaded the mine cars at the breast, split blocks of coal, sorted out waste material, and aided the miner in setting props and other tasks. The skilled miner was at the top of the underground hierarchy. He generally worked as an independent contractor, supplying his own tools, powder, and helper, and being paid a fixed price per carload of coal. The miner directed the opening and advancing of the breast, determined how to cut the coal and when and how to prop the roof.

- 2. Consideration Miner: Under abnormal condition, such as a diminution in the thickness of the coal and an undue increase in the amount of rock to be handled, it is impossible for the contract miner to earn a fair day's wage by the exertion of reasonable efforts. In such instance he may be placed on "consideration" basis and paid a fixed daily or hourly rate of wages so long as those conditions exist;
- 3. **Company Miner:** The company miner was paid on a daily or hourly basis. He did various kinds of work of a general mining nature, such as blasting rock, driving gangways through caved ground, etc.

### **Vocabulary Note:**

In the early days of mining in the South Wales coalfields, a collier and his boy (a miner and his laborer, USA) worked ten to twelve hours a day underground, or the equivalent to two burning candles. (10 to 12 hours of work = two burning candles)

Men of all nationalities, from very early in the nineteenth century, worked as "company miners" (for the D&H or other companies). Contract miners and consideration miners, from the early days of anthracite mining in the Lackawanna and Wyoming Valleys, were less numerous. Virtually all of the contract "miners" in the Anthracite fields, in the early days, were Welsh. As the years passed, men of all nationalities, to be sure, became contract miners.

The first Irishman to be promoted to the position of "miner," we learn from his obituary, was Patrick Moffitt, who died on December 10, 1877:

"OBITUARY. / Died, at his residence in this city on Monday morning, the 10<sup>th</sup> inst., Mr. Patrick Moffitt, aged 63 years. /In the death of Mr. Moffitt, Carbondale looses one of her oldest and most honored citizens. Mr. Moffitt was born in Ireland [in 1814], and emigrated to this country [about 1836] to seek his fortune and make a new home, about forty years ago, while in the prime of early manhood. Immediately on his landing he came to Carbondale, then comparatively a small village, and has, we believe, ever since resided here. For the first year or two after his arrival here, he worked in the mines as a laborer, until the late Mr. Clarkson, then mining superintendent of the Del. & Hud. Canal Co., seeing and appreciating his abilities and faithfulness as a workman, gave him a mine contract on his own account, and the writer of this has understood Mr. Moffitt to say that he was the first Irishman who was promoted to the position of a miner, as in those early days of our coal business the miners, so called, were almost exclusively Welshmen [emphasis added]. He was a very industrious and ambitious workman, oft times doing the ordinary work of two men, and diligently continued at this work for several years. But he aspired to other and less laborious work, more fitted to his tastes and abilities. So, about the year 1844 or '45 he joined in a partnership with a Mr. Patrick Gilroy, a young man of some business experience, and engaged in the mercantile business. After a few years of partnership, Mr. Moffitt bought out the interest of his partner and ever after conducted business on his own account. He soon took rank with the best business houses in our town, and under his careful and judicious management his business constantly enlarged. His sterling integrity and unblemished honor in all his business transactions made him very popular, and he enjoyed the full confidence of both his patrons at home and the merchants of New York and Philadelphia. He despised meanness instinctively in all its phases. To his customers he was always kind and indulgent, indeed almost to a fault. He was a benevolent and charitable man, and many will very much miss him in this regard. His attachment to his friends was strong and sincere, and his purity of heart and life were all that could be desired. The strongest trait in his moral nature was

perhaps that of Conscientiousness. He was eminently truthful and just, and one of whom it may be said there was no cause for fear. Mr. Moffitt was not a brilliant man, but he was that which is far better:--he was a man of sound judgment and native good sense—always to be relied upon courteous and affable to all he came into contact with—modest and unpretentious in his deportment. But his unbending sense of justice and right sometimes caused him to be terribly severe toward those whom he knew to be notoriously bad. He was a devout and religious man in the high sense of the word, and most faithful to his religious convictions. The Catholic church in Carbondale by his death has lost one of her very best members. In all the relations of life he sustained the character of a true Christian gentleman, and while possessing decided and positive convictions of his own he always treated the opinions of those from whom he differed with a true respect, and never allowed any differences in opinions to interfere with his friendships. In his domestic relations he was eminently happy. He was a very kind and tender husband and most affectionate father. His family will feel their loss very deeply. To them it is irreparable. / The circle of our citizens to which Mr. Moffitt belonged Death is narrowing year by year. There are not a great many left now who have so long resided here as he has done, and they are quietly dropping off like the leaves from the autumn trees. / A too close application to business for over thirty years undermined his strong constitution, and for the last few years his immediate friends noticed with solicitude his failing powers. His natural forces were giving way and being himself aware of it he made full preparation a few months before his last sickness to wind up his affairs and retire from all active business. Death came, however, before he had consummated his intentions. His sickness was not of long duration and was at times painful, which he bore with true Christian patience and fortitude, and at length he passed away as quietly as a little child going to sleep. / The announcement of his death caused a deep sorrow amongst all his friends and acquaintances. On the day of his funeral [Wednesday, the 12<sup>th</sup>] the business houses in the city were closed for two or three hours. The very large church was filled with sympathizing friends, many of whom we noticed from New York, Scranton, and other places at a distance. A solemn high mass was celebrated on the occasion, and an impressive and appreciative discourse was given by Bishop O'Hara of Scranton. All the services and ceremonies were of the imposing character which belong to this ancient church. A very large concourse followed his remains to the grave. / Carbondale, Dec. 13, 1877." (Carbondale Leader, December 15, 1877, p. 3.)

Patrick Moffitt's funeral was very large and attended by an impressive assemblage of clergy and dignitaries from the Lackawanna Valley and elsewhere. In the article titled "Death of Patrick Moffitt" (*Carbondale Advance*, December 15, 1877, p. 3) we read:

"His funeral took place upon Wednesday morning, 12<sup>th</sup> inst. A large concourse of friends and admirers from New York, Philadelphia, Wilkes-Barre, Pittston, Scranton, Hyde Park, Olyphant, Archbald, Honesdale, Mount Pleasant, Clifford, &c., assembled at his late residence, and his remains were conveyed to the Church of St. Rose of Lima, where the funeral services were held. / The remains were taken to the head of the main aisle and placed upon a catafalque, at each end

of which were large pedestals containing candelabras. Upon the elegant casket were placed a cross and bouquets of flowers. / Requiem Mass was offered up for the purpose of Mr. Moffitt's soul, Father Prendergast, (nephew to Mrs. Moffitt,) of Middletown, N. Y., celebrant, and Fathers O'Neill and Brennan, of Phila., deacon and subdeacon, and Father Dunn, of Scranton, Master of Ceremonies. Bishop O'Hara and the Reverends Prendergast of Phila., O'Malley and Bergen of Hawley, Shelly of Scranton, McMurray of Dunmore, McManus of Archbald, Loughran of Minooka, Crane of Pleasant Valley, Whitty of Providence, Roach of Hyde Park, and Carew and McGrath of Carbondale, occupied seats within the sanctuary. / Messrs. Hugh O'Neill, John E. McWhorter of N. Y., James Coyle, P. M. Moffitt, John Nealon, James McHale, Stephen Maroney and John Murrin acted as pall-bearers, while Mr. John Furey of N. Y. performed the duties of funeral marshal. A large congregation of Catholics and Protestants were present, in fact all places of business were closed and our business men turned out en masse to reverence the memory of the man whom they knew so long and respected so much. / Bishop O'Hara pronounced the funeral discourse, taking his text from the 2d epistle of St. Paul to the Corinthians. He prefaced his remarks by referring to the reserve of the Church in its eulogies of the dead, and its preference for prayers for their eternal refreshment and repose. At the conclusion of the discourse, the Bishop bestowed the blessings, and at 12:30 o'clock the immense procession moved from the Church. The burial took place at the new cemetery, in a vault specially designed and covered with a large iron plate—Rev. Edmund Prendergast, another of Mrs. Moffitt's nephews, pronouncing the last blessings at the grave. Truly a good man has passed away. May he rest in peace."

In a related notice in the same issue of the *Carbondale Advance* (December 15, 1877, p. 3) we read:

"Among our old citizens, now residing in other towns, that we noticed in attendance at the funeral of Mr. P. Moffitt, were Messrs. H. S. Pierce, Lewis Pughe, Wm. N. Monies, Wm H. Richmond and J. M. Poor, Scranton; H. R. Hughes, Pittston; Richard F. Walsh, Wilkes-Barre; P. J. White, Archbald. There were also present John McWhorter and John Furey, of N. Y.; John Kelly, Honesdale; D. B. Brainard, Scranton, etc."

Anthracite miners, whatever their nationality, were extraordinary men. One such miner, whose name we have not yet learned, invented and made "The Apostolic Excelsior Clock," which is described in an article that was published in the *Carbondale Leader* of December 13, 1873 as follows:

"A GREAT MECHANICAL WORK.—It is a clock made and invented by a miner. The clock is similar to the Strasbourg clock, with much fine finish, but not so large, being five feet high and three and a half wide, with four dial plates, one telling the minutes, another the hours, another the days of the week, the fourth the days of the month. The clock strikes the quarter hours on the

small bells, and the hours on the large ones. / 'Over the top indicator is a small disk indicating the age of the moon, and on either side the statue of Archangel Michael and old Father Time. All this is surrounded with Gothic windows and finely carved pillars and on each side stands an Egyptian obelisk. Above the dial is an inscription 'The Apostolic Excelsior Clock.' In the middle of the upper section stands the figure of Christ holding a flag in hand, and above it in a half circle is an appropriate inscription in German, and a miniature gallery surrounds the whole upper part. Shortly after twelve o'clock at noon, a door opens at the left of the statue of Christ, and twelve apostles move out and pass about the statue, while the bells toll a chime. Peter is at the head carrying a key, and all the others have an emblem indicating who they are. When each one arrives opposite the figure of Christ it turns its face toward him and then passes, except Judas, who passes straight along. After Peter has passed, the bells cease to toll, and a cock crows loud and flaps his wings. The door then opens on the opposite side and the apostles pass in when the cock crows again. This march can be produced at any time at the will of the operator.' / Will be on exhibition for one week under Mr. Gritman's law-office, Carbondale, commencing Monday, Dec. 15. Admission fifteen cents; children ten cents. Exhibit daily at ten A. M., two, four and seven P. M." (Carbondale Leader, December 13, 1873, p. 3)

#### **Miners' Certificates**

To become a contract miner, one appeared before and was examined by a mining board in each of the mining districts in Pennsylvania. If, after having been examined by such a board and having been declared competent to be employed as a miner in the anthracite coal mines of the Commonwealth of Pennsylvania, one was issued an Anthracite Miners' Certificate of Competency.

Given below are the Antharcite Miners' Certificates of Competency for eight miners from northeastern Pennsylvania:

- 1. Edward Ruane
- 2. John Valentine
- 3. John Bosange
- 4. John Boland
- 5. Charles "Clem" Custara
- 6. Anthony Seaver
- 7. Hugh Johnston
- 8. Peter Coggins

1. Miner's Certificate of Edward Ruane, February 2, 1910 (he was born in Archbald; certificate issued at Peckville):

| Lee #3   | 0 (9/29/11 # 3) 8                            |
|--|--|
| No. 890 NO. 89 | Act of July 15, 1897.  ACT OF July 15, 1897. |
| TO WHOM IT MAY CONCERN:  This is to Certify, That Odward Reason of FIRST ANTHRACITE COAL DISTRICT OF PENNSYLVANIA, having appeared day of 19/0, and having us is hereby declared competent to be employed as a Miner in the Anthracite Coal wealth, agreeably to the Act of Assembly of July 15, 1897, entitled, "An Act to proof Miners in the Anthracite region of this Commonwealth, and to prevent the empersons as Miners in Anthracite coal mines."  Weight 150 Height 5 ft here Color of Eyes Brown   | before us this                               |
| Color of Hair Mach Identified by Muchael   | Morand<br>Cauns<br>1010                      |

2. Miner's Certificate of John Valentine, September 1, 1920: born "ITLA" ("Italy"?), living at Archbald at the time; certificate issued at Olyphant:

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|--|--|
|  | Act of July 15, 1897   |
| Anthracite Miner's                           | Certificate  |
| Sub-Board Ro. 2 of Fire                      | t District   |
| CERTIFICATE OF COM                           | PETENCY  |
|  | opeared before us this   |
| Birthplace Mills & Lally Printers, Archbald. |  |

Valentine Miner's Certificate donated to the Historical Society on September 16, 2015 by P. J. Fortuner, Carbondale.

3. Miner's Certificate of John Bosange, November 7, 1923: born in Lithuania, certificate issued at Carbondale. Certificate donated to the Carbondale Historical Society by the Lackawanna Historical Society on March 10, 2015.

|                                | THRACI   | TE MINERS   | CERTIFIC               | Act of July 15, 1897    |
|--------------------------------|--|---|------------------------|-------------------------|
| PACE OF                        | YW.  | Sub-Board No.   | . 3.                   | TE                      |
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| Commonwealth<br>examination of | , agreeably to the Act<br>Miners in the Anthra | be employed as a M<br>of Assembly of July 1<br>cite region of this Con<br>Anthracite coal mines." | 5, 1897, entitled, "An | Act to provide for the  |
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| ACQUA TON                      |  | ndale, PaNOV 7 - 1923   | Michael                | Momos                   |

4. "Certification of Registration of Sub-Board No. 1, John Boland, July 23, 1889" (document donated to the Carbondale Historical Society by the Lackawanna Historical Society on March 10, 2015.

| NO 318   |   | 25   |
|--|---|--|
| of Rec   | gistration of Sc  | ib-Bo-   |
| Centificate of Rec   |   | No. 1.   |
| White the state of | OMETAMAY CON  |  |
| of Carbonage  Examining Board," of the First In sylvania, that he was actually engather time of the passage of the Act for the Examination of Miners in duly registered as such.  WITNESS the hands of one of the Pa., this  | Pachas produced satisfaced as a Miner in an Anthrof Assembly of 9th May, 1886 the Anthracite Region of this are Sub-Committees of said Bo | sfactory proofs to the "Miners' mracite Coal Regions of Pennacite Mine in Pennsylvania at 9, entitled, "An Act to provide so Commonwealth, &c.," and is pard, at Carbondale Committee.  Committee. |

5. "ANTHRACITE MINER'S CERTIFICATE / Sub-Board No. 1, Lackawanna County / CERTIFICATE OF COMPETENCY" of Charles Custara, March 6, 1946, Dickson City, PA. Certificate donated to the Carbondale Historical Society on April 19, 2017 by Charles Custara's special friend, caregiver, and fishing buddy, Angie Need, Montdale, PA.

| Serial A Nº 3881   | 12                          | D A                        | Act of July 15, 1897 |
|--|-----------------------------|----------------------------|----------------------|
| Anthracit  | te Miner's                  | Wertifica                  | to                   |
|  | ARD No. 1, LACKAWANNA       |                            |                      |
|  | ATE OF CO                   |                            |                      |
| CERTIFIC   | ATE OF CO                   | MIFETERCI                  |                      |
| To Whom It May Concern:  | Charles C                   | outara                     | of the FIRST         |
| ANTHRACITE COAL DISTRICT of PE   | NNSYLVANIA, Having appe     | eared before us this       | of the FIRST         |
| of March 1946, and   | d having been duly examined | by us, is hereby declared  | competent to be      |
| employed as a MINER in the Anthracite<br>July 15, 1897, entitled "An Act to provi-<br>wealth, and to prevent the employment of | de for examination of Miner | s in the Anthracite region | of this Common-      |
| Weight 190 Height  | 6 ft -                      | in. Color of eves          | Blue                 |
| Color of Hair Light  | Identified by               | arl Lan                    | bert                 |
| Birthplace Penna   | Age 24                      | 3                          |                      |
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|  | SUB-COMMITTEE               | Judrew C                   | oar _                |
| d.,  |                             | Husting Voli               | vilih                |
| ssued at Wickson City  | Pa Gtil                     | March                      | 1 46                 |

In the period September 1963—July 1965, Charles Custara worked as a <u>Consideration Miner</u> for Di Mario Coal Company, 1921 Prospect Avenue, Scranton, PA.

**Consideration Miner:** Under abnormal condition, such as a diminution in the thickness of the coal and an undue increase in the amount of rock to be handled, it is impossible for the <u>contract miner</u> to earn a fair day's wage by the exertion of reasonable efforts. In such instance he may be placed on "consideration" basis and paid a fixed daily or hourly rate of wages so long as those conditions exist.

On April 19, 2017, Angie Need, Montdale, PA, donated 36 of Charles Custara's pay slips from the Di Mario Coal Co. to the Carbondale Historical Society. Here are six of those pay slips from the period September 1962—July 1965:

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| No.     | Item                 | Rate    | Amount |
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|         | Timbers              |         |        |
| -       | Rock                 |         |        |
| _       | Rock Allow.          |         |        |
| 7.      | Hours                | 24270   | 190 30 |
| 10      | Hours<br>Days        | 1334    | 1/2 2  |
| -       | Days                 | 179     | 3 7    |
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| -       | Wage Increase        | 5.795   |        |
|         |                      | Total   |        |
| _       | Overtime             | 403     |        |
| -       | Shifts               | .483    |        |
|         | Shifts<br>Shifts     | .378    |        |
|         | Shifts               | .504    |        |
| -       | Shifts               | 1.339   |        |
| - The s | Shifts               | .28     |        |
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| AREA I  | Shifts               | .63     |        |
|         |                      |         |        |
|         |                      |         |        |
|         | Gross Earnings       |         |        |
|         | Less Powder          |         |        |
|         | Total Taxable Earnin | os -    |        |
|         |                      | -       |        |
| Deducti | ons:                 |         |        |
| ). A. B | . Tax                | 5.86    |        |
| Withhol | ding Tax             | 23.50   |        |
| War Bo  | ends                 |         |        |
| Coal &  |                      |         |        |
| Union I |                      | 4.25    |        |
|         | hool Tax             |         |        |
|         | ouncil Tax           |         | - 5    |
| Comm.   | Chest                |         |        |
|         |                      |         |        |
|         |                      |         |        |
|         |                      |         |        |
| ,       | otal Deductions      | 33.6/   |        |

| Rate   | 1963<br>Amount                                |
|--|---|
| auron 31<br>12-<br>Rate  | Amount  |
| auron 31<br>12-<br>Rate  | Amount  |
| 72 Rate  | Amount  |
| Rate   |   |
|  |   |
| 21-06  | 262   |
| 21-00  | 262   |
| 21-06  | 252   |
| 21-00  | 262   |
| 21-00  | 262   |
| 21-06  | 252   |
| 21-06  | 252   |
| 21-06  | 197   |
|  | 100   |
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|  | N   |
|  | -   |
|  |   |
| Total  |   |
|  |   |
|  |   |
| Total  |   |
| 5.795  |   |
| Total  |   |
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| .483   |   |
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| 9.14   |   |
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| 4.25   |   |
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|  | 49.7  |
|  | 202 7   |
|  | Total  .483 .322 .378 .504 .1.339 .28 .42 .63 |

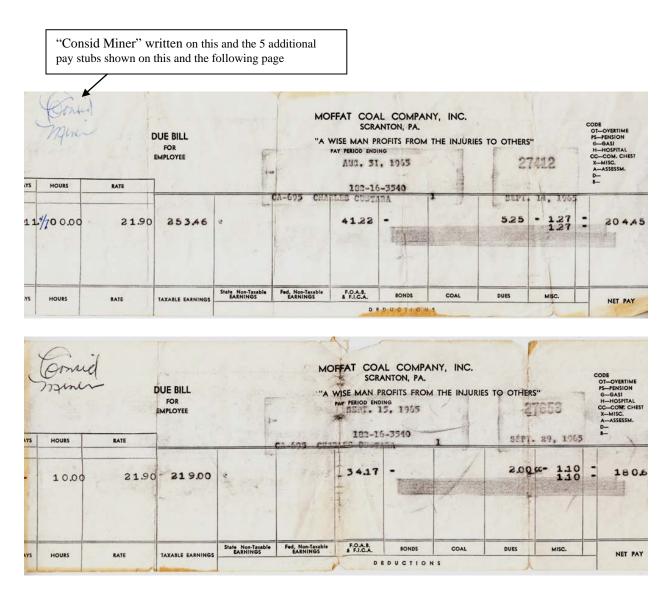
#### DI MARIO COAL CO. 1921 PROSPECT AVENUE SCRANTON, PENNA. Occupation Come mines Pay Period Ending november 30, 1963 8 No. of Starts No. Item Rate Amount Cars Coal Cars Coal Timbers Rock Rock Allow. Hours Hours 168 21.00 Days Days Allowance Labor Less Labor Total Wage Increase 5.795 Total Overtime Shifts .483 Shifts .322 Shifts .378 Shifts .504 Shifts 1.339 Shifts .28 Shifts .42 Shifts .63 Gross Earnings Less Powder Total Taxable Earnings **Deductions:** 5,50 O. A. B. Tax Withholding Tax 20.60 War Bonds Coal & Tax Union Dues 4.25 City School Tax City Council Tax Comm. Chest 30.35 **Total Deductions** Net Amount Payable

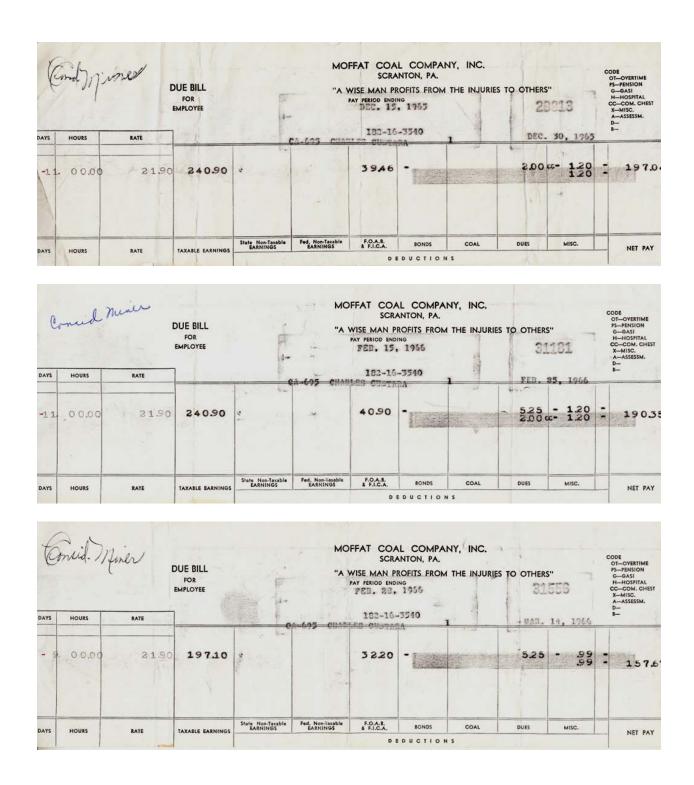
|         | Charle   | - Cas             | tara                    |   |
|---------|--|-------------------|-------------------------|---|
| Оссира  | tion Co  | v. Min            | ier                     |   |
|         | iod Ending   | inil 15.          | 1969                    | r |
| No. of  | Storte 7   |                   |                         |   |
| No.     | Item   | Rate              | Amount                  | - |
|         | Cars Coal  |                   |                         | 1 |
| _       | Cars Coal  |                   | -                       | - |
| -       | Timbers  | -                 |                         | - |
|         | Rock   |                   |                         | - |
|         | Rock Allow.  |                   |                         | - |
|         | Hours  |                   |                         | - |
|         | Hours  |                   |                         | - |
| 7       | Days   | 21.00             | 141                     | - |
| 1       | Days   |                   | 11/                     |   |
|         | Allowance  |                   | -CHIRC - OF             |   |
|         |  |                   | 2 33                    | 1 |
|         |  |                   |                         |   |
|         | Labor  |                   |                         | L |
|         |  | Total             | I Company               | L |
|         | Le   | ss Labor          |                         |   |
|         |  | Total             |                         |   |
|         | Wage Increase  | 5.795             |                         |   |
|         | i age mereuse  | Total -           |                         | - |
| _       | Overtime   | Total             |                         | - |
|         | Shifts   | .483              | OT LOS                  | - |
| -       | Shifts   | .322              |                         | - |
| OTA-    | Shifts   | .378              |                         | - |
|         | Shifts   | .504              |                         |   |
|         | Shifts   | 1.339             |                         |   |
|         | Shifts   | .28               |                         |   |
|         | Shifts   | .42               |                         |   |
|         | Shifts   | .63               |                         |   |
|         |  | The second second | 19:00                   |   |
|         |  |                   |                         | - |
|         | Gross Earnings   |                   |                         |   |
|         | Less Powder  |                   | NAME OF THE OWNER, WHEN |   |
|         | Total Taxable Earni  | ngs               |                         |   |
| Deducti |  |                   |                         | - |
| O. A. I |  | 533               |                         |   |
|         | lding Tax  | 12.70             |                         |   |
| War B   |  | 12/0              |                         |   |
| Coal &  |  |                   |                         |   |
| Union   |  |                   |                         |   |
|         | chool Tax  |                   |                         |   |
|         | ouncil Tax   |                   |                         |   |
| Comm.   |  | 200               |                         |   |
|         |  |                   |                         |   |
|         | 1  |                   |                         |   |
|         | Total Deductions   | 20.03             |                         |   |
| _       | The state of the s | 0.1-1-            | 126                     | - |

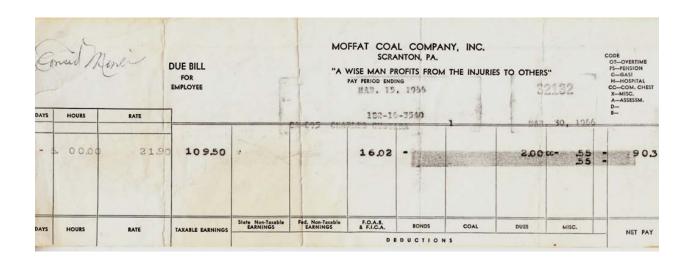
|         | 1921 PRO                  | SPECT AVENUE |                  |       |
|---------|---------------------------|--------------|------------------|-------|
|         | Char<br>tion M            | ler Ca       | ustar            | a-    |
| Оссиро  | tion //                   | enic         | 1960             | _     |
| No. of  |                           | Mer 10       | . // 0 /         |       |
| No.     | Item .                    | Amount       |                  |       |
|         | 10000                     |              |                  |       |
| -       | Cars Coal                 |              |                  | _     |
| -       | Timbers                   | _            |                  | -     |
| 10-11-1 | Rock                      |              |                  |       |
|         | Rock Allow.               |              |                  | -     |
|         | Hours                     |              |                  | *     |
|         | Hours                     |              | 1                |       |
| 11      | Days                      |              | 240              | 90    |
|         | Days                      |              |                  |       |
|         | Allowance                 |              | And the second   |       |
|         |                           |              |                  |       |
|         |                           |              |                  |       |
|         | Labor                     |              |                  |       |
|         |                           | Total        |                  | (2.22 |
|         | Le                        | oss Labor    |                  |       |
|         |                           | Total        | DISTERNATION AND | See 3 |
| 77.0    | 1                         |              |                  |       |
| -       | Wage Increase             | 5.795        |                  | -     |
|         | I a u                     | Total        | -                | -     |
|         | Overtime                  | .483         |                  | -     |
| -       | Shifts                    | .322         |                  | _     |
|         | Shifts                    | .378         |                  |       |
|         | Shifts<br>Shifts          | .504         |                  |       |
|         | Shifts                    | 1.339        | -                |       |
|         | Shifts                    | .28          |                  |       |
|         | Shifts                    | .42          |                  |       |
|         | Shifts                    | .63          |                  |       |
|         |                           |              |                  |       |
| -       |                           |              |                  |       |
|         | Gross Earnings            |              |                  |       |
|         | Less Powder               |              |                  |       |
|         | Total Taxable Earn        | ings         |                  |       |
| -       |                           |              |                  | _     |
| Deduc   |                           | . 000        |                  |       |
|         | B. Tax                    | 26.50        |                  |       |
|         | olding Tax                | 26.50        |                  |       |
| War I   |                           |              |                  |       |
| Coal    |                           |              |                  |       |
| Union   |                           |              |                  |       |
|         | School Tax<br>Council Tax |              |                  |       |
|         |                           | 2.00         |                  |       |
| Comm    | . Chest                   | X.00         |                  |       |
| -       |                           |              |                  |       |
|         |                           |              |                  |       |
| -       |                           |              |                  |       |
|         | Total Deductions          | 37.23        |                  | 367   |

|         | 1921 PRO           | SPECT AVENUE | ).      |
|---------|--------------------|--------------|---------|
| (       | harles             | Cus          | tara    |
| Occupat | in Con             | 1 711-       | ine     |
|         |                    | 1 2          | 1, 1965 |
| Pay Per | iod Ending         | my 3,        | , 1703  |
| No. of  | Starts             | 1            |         |
| No.     | Itom               | Rate         | Amount  |
|         | Cars Coal          |              |         |
|         | Cars Coal          |              |         |
|         | Timbers            |              |         |
|         | Rock               |              |         |
|         | Rock Allow.        |              |         |
|         | Hours              |              |         |
|         | Hours              |              |         |
| 11      | Days               |              | 240     |
| //      |                    | -            | 1       |
|         | Days               |              |         |
|         | Allowance          |              |         |
|         |                    |              | -       |
|         |                    |              |         |
|         | Labor              |              | -       |
|         |                    | Total        |         |
|         | L                  | ess Labor    |         |
|         |                    | Total        |         |
|         | Wage Increase      | 5.795        |         |
| - 111   | Trage Increase     |              |         |
|         | 1- "               | Total        |         |
| _       | Overtime           |              |         |
|         | Shifts             | .483         |         |
| -       | Shifts             | .322         |         |
|         | Shifts             | .378         |         |
|         | Shifts             | .504         |         |
|         | Shifts             | 1.339        |         |
|         | Shifts             | .28          |         |
|         | Shifts             | .42          |         |
|         | Shifts             | .63          |         |
| 1911    |                    |              |         |
|         |                    |              |         |
|         | Gross Earnings     |              |         |
|         | Less Powder        |              |         |
|         | Total Taxable Earn | ings         |         |
|         |                    |              | -       |
| Deduct  | ions:              |              |         |
| O. A.   |                    | 8.73         |         |
|         | lding Tax          | 30.40        |         |
| War B   |                    |              |         |
| Coal 8  | Тах                | 1            |         |
| Union   |                    | 5.25         |         |
|         | chool Tax          |              |         |
|         | ouncil Tax         |              |         |
| Comm.   |                    |              |         |
|         |                    |              |         |
|         |                    |              |         |
|         |                    |              |         |
| -       | Total Deductions   | 44.38        |         |

In the period August 1965—March 1966, Charles Custara worked as a Consideration Miner for the Moffat Coal Company, Inc., Scranton, PA. His pay stubs for that period, all of which are marked "Consid. Miner" in the upper left corner, are given below.







Here is the obituary of Charles "Clem" Custara, who died on June 9, 2005:



Charles "Clem"
Custara, North
Scranton, died
Thursday morning
at Community Medical Center.

Born in Scranton, son of the late Charles and Della Wierbowski Custara, he was a World War II Army veteran, having served in the Pacific theater. He had been employed by the Moffat Coal Co. and later the Tarrone and Barberra Construction Co. before retirement.

He had a great love for animals and nature and he especially enjoyed fishing and hunting.

Surviving are a sister, Kathleen Baldwin, La Mesa, Calif.; several nieces and nephews, and a special friend and caregiver, Angie Need, Montdale.

He was preceded in death by a brother, Anthony, and a sister, Josephine Scantlebury.

A service will be conducted Wednesday at 9:30 a.m. in Cathedral Cemetery Chapel.

Friends may call Tuesday evening, 6 to 8, at the Joseph C. Noreika Funeral Home, 1740 N. Main Ave.

Angie Need, Montdale, PA, Charles Custara's special friend, caregiver, and fishing buddy, has graciously provided us with some very interesting notes about Charles Custara's life and his career as a miner in the Scranton area, especially in the Dickson City, Bell Mountain, Viewmont Mall, and K Mart area. As Angie Need notes in her recollections about Clem Custara, "he was very proud to have been a miner and spoke frequently of his experiences working in the anthracite fields of NEPA." Here, then, are Angie Need's notes about the life and work career of her good friend Charles "Clem" Custara:

"Clem"
Charles Custara
14 Aug 1922
9 June 2005
Army WWII Technical 5

At 16 years old worked in a CC Camp (Civilian Conservation Corp.) near the petrified forest for 6 months. Dug by hand about 1/2 mile of a 30-35 mile ditch that was being dug to run water pipelines.

At age 17 went to work in the mines near Freeland for the Glenn Alden Coal Company/Hudson Coal Company
Working @ Bell Mountain slope before the Army.

Received his mining papers (the mining certificate) at age 24 after returning from the Army.

Worked for the Moffat coal Company and Di Mario Coal Company from 1946 to 1966 or 1968

After leaving the mines, Clem worked for a construction company as a heavy machine operator on several large commercial projects. He also worked for his brother, Tony in his vending machine business.

Clem was an accomplished fisherman and outdoorsman who appreciated nature. He was an avid reader with an inquisitive mind. He was very proud to have been a miner and spoke frequently of his experiences working in the anthracite fields of NEPA.

Drove the slope under the area where the Viewmont mall is built. Put the belt in. Left 74-100 lbs of dynamite, delays and explosives at the face of the mine the day the mines closed! Told to leave everything that the mine was closed. Not allowed to shoot the rock - had to leave everything. Used dynamite 20% mixed with sawdust or clay. 1 box per cut 40%-60% to shoot the rock.

#### Viewmont mall area

At 90-100 feet underground the vein starts and runs about 3 feet. Around Perkins, the top is filled in 40 feet. At 300 feet the vein increases in size to about 4 feet then levels off to about 6 feet. The slope levels off 1400 feet about 1/2 mile in Dickson city. (China veins are robbed under Viewmont Mall)

Before the army, he helped cave Bell mtn and robbed pillars completely in the area by Wegmans behind where the old walmart was built.

Near the green water tower by Kmart, there is a tunnel. The vein of coal runs like the mountain at a 20 degree pitch. They drove in so water would run out. 800 feet of solid rock into coal. Glen Alden and Pennsylvania coal companies robbed the pillars on each side of the mountain - on left Glenn Alden coal on the right Pennsylvania coal company. Then Glenn Alden caved the area and some wells went dry. A second tunnel by Kmart was drove 600 feet into solid rock. A third tunnel at the side of Rt6 by "Schroeder". It was a big mess because the contract was given to Rodgers coal company. They got rich.

Clem learned how to shoot coal and how to blow a tunnel before going into army while working for "Rodgers."

6. Certificate of Competency, Anthony Seaver of the Borough of Forest City; certificate is dated June 4, 1906. Anthony Seaver was born in Austria in 1882, and at the time of his certification was 24 years old. The original of this certificate is in the collection of the Forest City Historical Society and was made available for publication here on May 31, 2017 by Peggy Brager.



7. Certificate of Competency, Hugh Johnston, age 27, born in Forest City, PA; certificate is dated October 7, 1914. The original of this certificate is in the holdings of the Forest City Historical Society and was made available for publication here on May 312, 2017 by Peggy Brager.

| No. 2149  ANTHRACITE MINERS' CERTIFICATE  Sub-Board No. 3.  Act of July 15, 1897   |
|--|
| CERTIFICATE OF COMPETENCY.   |
| TO WHOM IT MAY CONCERN:  |
| This is to Certify, That Sugh formston of the FIRST ANTHRACITE COAL DISTRICT OF PENNSYLVANIA, having appeared before us this day of Colobez 1914, and having been duly examined by   |
| us, is hereby declared competent to be employed as a Miner in the Anthracite Coal Mines of this Commonwealth, agreeably to the Act of Assembly of July 15, 1897, entitled, "An Act to provide for the examination of Miners in the Anthracite region of this Commonwealth, and to prevent the employment of incompetent persons as Miners in Anthracite coal mines." |
| Weight 15T Height 5 9 Color of Eyes Prown  |
| Color of Hair Prown Identified by Charles Falloy   |
| NOT ACQUAINTED WITH GAS.  SUB-COMMITTEE John & Goodwin John Carden   |
| Issued at Carbondale, Pa.,  Birthplace Christ Bity Age   |

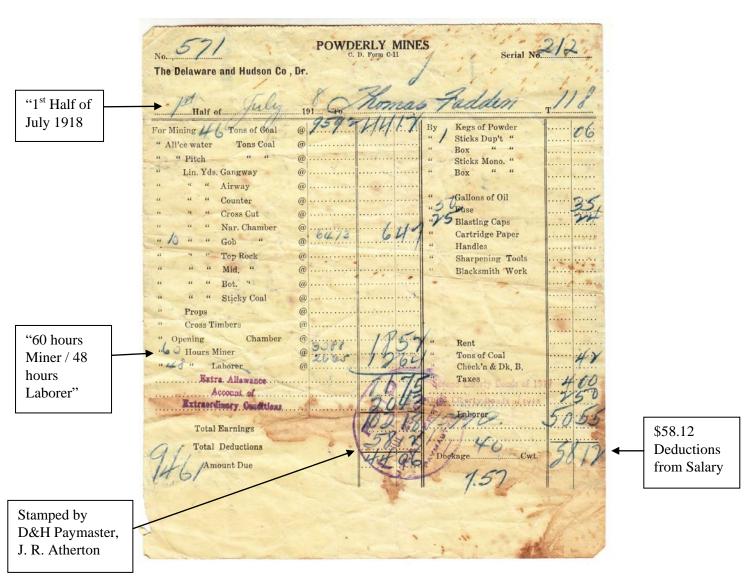
8. Certificate of Competency of Peter Coggins, First Anthracite Coal District of Pennsylvania, certificate dated December 3, 1909. Peter Coggins, who was born in Ireland, was 35 years old at the time. He was the great grandfather of Skip Race, of Carbondale, who made available this copy of this certificate for publication here on July 5, 2017.

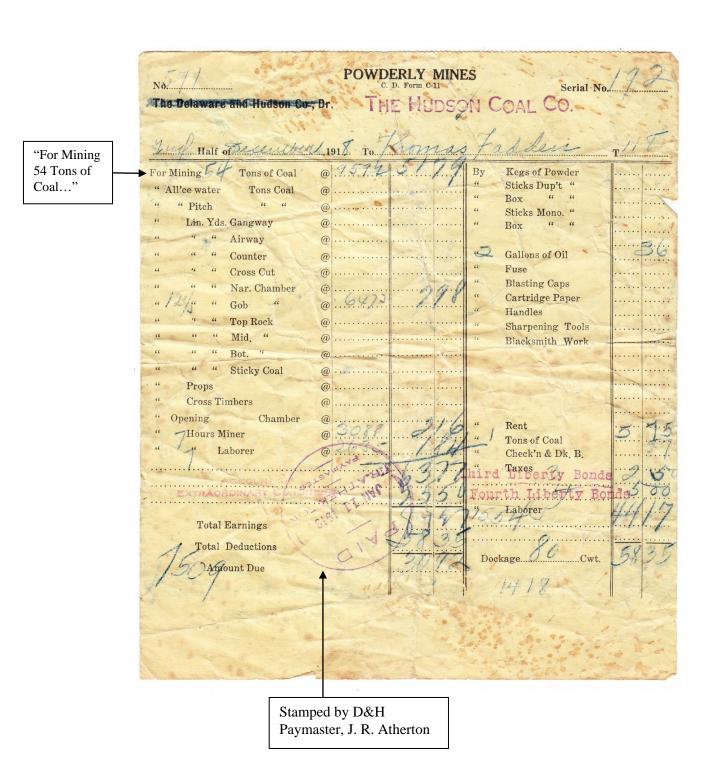
| No. 105   | ACITE MINERS' ( Sub-Board No. 3.  | ER TIFC  |
|---|---|--|
| ANIL  | Sub-Board No. 3.  | ATE  |
|   | ERTIFICATE OF COMPE   |  |
| This is to Certify, That_ANTHRACITE COAL  | DISTRICT OF PENNSYLVANIA  | of the First Dist  |
| us, is hereby declared co<br>Commonwealth, agreeably<br>examination of Miners in t<br>incompetent persons as Mi | ompetent to be employed as a Miner in<br>to the Act of Assembly of July 15, 1897,<br>the Anthracite region of this Commonwea<br>ners in Anthracite coal mines." | the Anthracite Coal Mines of thi<br>entitled, "An Act to provide for th<br>tth, and to prevent the employment of |
| Weight 160 Color of Hair 18x  |   | of Eyes Blue   |
| Color of Hair   | strict Freedom SUB-COMMITTEE Strict Secretary barbon dale, this 3 in the place of the land 35 y.  | Nathaniel Davis  |
| Die   | strict Secretary  | Harry Keeper 19.8  |

# Miners' Pay Slips

Miners' pay slips frequently provide very detailed and interesting data that is available nowhere else, as we have seen from those from Charles Custara shown above. In Volume XIII in this series (*Troubled Times—the 1870s*) we looked at salaries and pay days for the miners, railroad, and canal workers on the D&H. Here we will take a closer look at the question as we examine a variety of miners' pay slips.

Thomas Fadden worked in the Powderly Mines. Here are his pay slips for the first half of July, 1918, and the second half of December, 1918. These slips were purchased on E-Bay by John Buberniak, on behalf of the Carbondale Historical Society, in February 2016 from Timothy M. Koontz, 173 Shady Acres Lane, Kearneysville, WV 25430-3588.





### **Timbering:**

The gangways, or passageways, in these chamber-and-pillar mines, were timbered to support the roof. The purpose of timbering in the mines was not to support the weight of the overlying strata. The heaviest timbers available would not be strong enough to bear the great weight of coal, rock and earth which lies between the opening, or passageway, and the surface.

Except in badly crushed and caved ground, the weight of the overlying strata is supported by solid pillars of coal, usually left in the mines during preliminary operations, in much the same way as the ceiling of a room is supported by the walls. As the ceiling of a room is strong enough to support itself in the open space between the walls, so is the rock and coal immediately overlying the mine opening.

In some cases, the roof rock or coal is friable and, if no artificial support is provided, pieces might become detached and fall, constituting a menace to life and limb. Where such a condition exists, timber sets, consisting of a heavy cross member or *collar*, supported by uprights or *legs* are installed. Should the roof rock be badly broken it is necessary to install many such timber sets at short intervals, and in some instances, to protect the space between timber sets by smaller timbers, known as *forepoling* or lagging, driven between the timbers and the rocks to hold up small pieces of rock which may flake from the roof or sides.

### **Mine Timber and Timbering:**

On the question of mine timber and timbering—and on the question of coal mining generally—the reader can do no better than to refer to *The Coal Miner's Handbook A Handy Reference Book for Coal Miners, Pit Bosses, Fire Bosses, Foremen, Superintendents, Managers, Engineers, and All Persons Interested in the Subject of Coal Mining* (1913: International Correspondence Schools, Scranton, PA).

Here are the sections on "Choice of Timber" and the two initial paragraphs on "Preservation of Timbers" from the unit titled *MINE TIMBER ND TIMBERING* in that ICS handbook:

"Choice of Timber.—Timber used for underground supports in mines should be long-grained and elastic, and, at the same time, should not be too heavy. Oak, beech, and similar woods are very strong, but are heavy to handle, and when set in place are treacherous, because they are short-grained and not elastic, so that they break without warning. Mine timber is placed, not with the intention of ultimately resisting the great pressure of the earth, but to keep any loose pieces in place and to give warning to the workmen, thus enabling them to escape before a fall occurs. For this reason, pine and fir are suitable for mine timbering, as they combine a fair amount of strength with considerable elasticity, and hence give warning long before they break. Very

elastic timbers, such as cypress, willow, etc. are to be avoided, for they simply bend like a bow and do not offer the necessary resistance to hold the material in place for a short time. / When selecting props, the principal points to be observed are: Straightness, slowness of growth as indicated by narrow annular rings, freedom from knots, indents, resin, bum, and sap..." (p. 180)

On the question of cutting timber for use in the mines, we read the following in the *McGraw-Hill Miners' Pocketbook*. . .

"Time to Cit Timber.—The presence of much sap in the tree when it is cut causes the timber to decay more rapidly than it would otherwise owing to the fermentation of the sap permitting the growth of fugit that feed on the life of the timber. In growing timber, the sap ceases to run about the middle of December and starts again about the middle of February. Timber cut, therefore, in the months of December, January, and February will contain the least sap and prove more lasting than the same timber cut at other times of the year. The work of cutting timber in winter gives employment also to farm hands during their idle season; moreover, the task of transporting timber on sleds to the mines or the railroads is a much easier one in winter than during the seasons when wagons must be used."

"Preservation of Timbers.—The character of the ventilation in a mine has considerable effect on the life of any timber supports. Damp stagnant air will cause mold and fungus growth, which will be followed by the destruction of the timber through decay or dry rot. All timbered openings should be well ventilated, and provision made for the speedy removal of damp hot air, such as commonly occurs around pump rooms and along steam lines. Water is a good preservative, as it washes off the spores of the fungi as fast as they are formed, and for this reason shaft times are sometimes kept wet. / Timber may be also preserved: (1) by a solution of common salt and water; (2) by impregnating the wood with such metallic substances as sulphates of copper, iron, etc.; (3) by impregnation with the chloride of magnesium or zinc; (4) by creosoting; (56) by coal tar; (6) by carbolineum." (pp. 180-181)

1711

# Chute or "Pitch" Mining

In the Southern, or Schuylkill, Field; the coal beds were at steeply pitched angles. In mining such beds, a gangway is driven at the bottom of a seam. An opening is then driven upward in the coal from the gangway. The opening is timbered and lined with sheet iron over which the coal descends by gravity to the gangway. This structure is known as a *battery*. At the gangway end, it is made narrow. A bulkhead is placed inside the battery at the bottom of the chute so that the battery may be filled with coal which is later drawn off into mine cars standing in the gangway.

1712

# Longwall mining

In November 1889, Wm. S. Gresley, a mining engineer of Leicestershire, England, visited Carbondale to explain to American mining personnel the longwall system of coal mining in used in England, in particular in Warwickshire. A very interesting account of his presentations here on the pros and cons of longwall mining was published in the Carbondale Leader on November 25, 1889, p. 3, as follows:

"A NEW SYSTEM OF MINING. / No More Culm Heaps--Coal Waste Kept in the Mines. / The Scranton Truth of Saturday says: Mr. Wm. S. Gresley, a mining engineer of Leicestershire, England, is in this city. He has come to the Pennsylvania region to examine the system of mining. Since his arrival here Mr. Gresley has written for various mining journals a number of articles explaining the 'Longwall' system of mining in use in England, and in particular in Warwickshire. Mr. Gresley's article in a recent number of The Colliery Engineer caused a great deal of comment among mine owners and mining engineers. Of the coal mined at present only about 60 per cent, is taken out. Mr. Gresley claims that by the 'Modified Longwall' system 90 per cent. of the coal can be mined, thus increasing the present yield of coal about 50 per cent. / The Longwall system, as proposed by Mr. Gresley, will do away with pillars entirely, and the roof will be allowed to cave as the work proceeds. According to this system a heading is to be run from the shaft slope or tunnel to the end of the line of lease. At that point the farthest from the mouth of the mine the work of taking out the coal is to be begun. On each side of the heading, openings are to be made, and the coal is to be taken out for about 500 feet of each side. The work is then to proceed toward the mouth of the mine, and the roof allowed to settle behind the men as they advance. / In order to protect the men in their work and to make the mining possible, the roof is supported by props and by an abutment arrangement of logs raised in the form of a square pillar against the roof, the vacant space being filled in by 'gob,' or refuse, slate, clum, rock, etc. The men will work in parties of about 100 on each side, and divided into companies of 10 or a dozen each. As the work proceeds it is evident the heading will get shorter, and the roof being let down on the gob, having no pillars to support it, will occasion no danger

thereafter to the surface or to property thereupon. / As there will be no pillars all the coal will be virtually taken out, the only loss being the culm waste. / All mines, however, cannot be worked by the system. It is only applicable in veins where the pitch is less than twenty-five degrees. / The fall of roof upon the gob behind the men will come quicker, and the squeeze occasioned by such fall will cause a loosening of the coal, making it easier mined, and requiring less powder. The danger arising from old workings will be avoided. It is further claimed by Mr. Gresley that the water will find the best possible receptacle in the gob, and on this account there will be less need of pumping. / He further states that it will require no more timber than is at present used to prop up the roof; and fewer mules and mine cars will be needed. / The oft-repeated question as to what to do with the culm heaps and culm would be easy of solution. The culm and waste, slate, sulphur, etc. could be brought back into the mine to fill up gobs, and thus save acres of valuable land, and change the hideous appearance of a mining town studded with half a dozen of these dismal looking heaps. / The increase in the yield of coal in a given area would be about 50 per cent. which means a corresponding increase in the revenue to be derived by land owners. The coal measures of this State are fast being worked out, and even now a fear has been expressed by some of their too early exhaustion. It is not long ago that Col. J. A. Price had an article on the subject of economizing the waste of coal and reducing it to a minimum, claiming that the preservation of the coal tracts like the care of our forests is of great moment to the State. / A number of mine owners have in consideration the proposition of adopting it in their mines. It will probably be first used at Olyphant, where preparations are already being made for its introduction. If it be adopted one place and prove successful, there can be no doubt of its acceptance wherever it can be used with practical results. One drawback to the system is there is no guarantee that the danger to human life will be in any way lessened by its use, and this is a serious one indeed." (Carbondale Leader, November 25, 1889, p. 3)

In longwall mining, all of the coal is removed in one continuous operation (not in two phases as in chamber-and-pillar). An advantage of the longwall method is that less timbering is required than in chamber-and-pillar and it is not necessary to maintain gangways, with frequent large expenditures for timber renewal.

#### Advancing longwall and retreating longwall mining:

**Advancing longwall:** A gangway is started in the usual manner from the shaft or main transportation road. A solid block of coal is left in place for the protection of the shaft or main outlet, and then a working place is turned off at right angles to the gangway. Successive slices of coal are removed for the entire length of the working face until the outer limit of the property or area being mined is reached. The roof is allowed to collapse in the open space made by the removal of the coal.

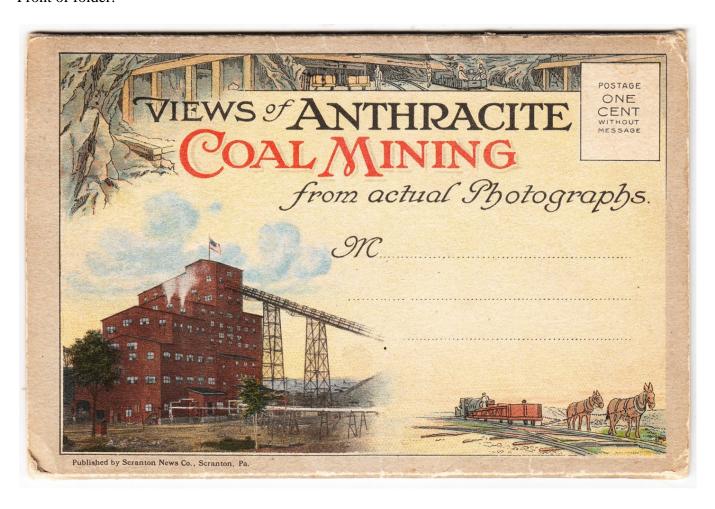
**Retreating longwall:** After all the coal possible has been removed on the advance, the block of

coal on the opposite side of the gangway is then attacked in like manner, commencing at the outer limit of the area and retreating toward the starting point of the advance near the shaft or main outlet to the surface. In the longwall method the coal is usually undercut by machine for the whole length of the working face (from 200 to 300 feet) to a depth of about 6 feet near the bottom of the bed in order to increase the effect of the explosive charge by providing an additional free face, thus decreasing resistance against the blast so that more coal is freed from the bed with a smaller amount of explosives.

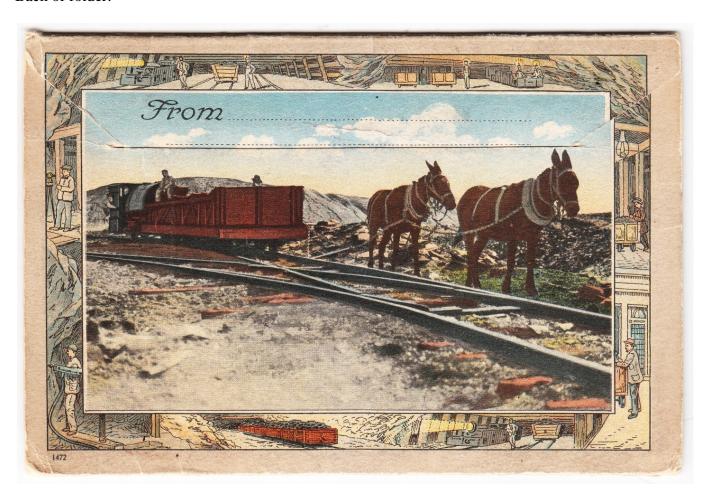
On page 26 of *Percival and Kulesa*, there is a photo by John Horgan, Jr. (photo #14379) titled "Longwall Machine Min[in]g. Loading Coal on Conveyor"; the photograph was taken c. 1915 at the Powderly Colliery, at Mayfield.

Let's take a look now at an extraordinary series of mining photographs that are the content of a post card accordion folder on anthracite mining titled "Views of Anthracite Mining from Actual Photographs." The original of this remarkable post card is in the collection of Doug Goodrich, who has graciously given us permission to present it here.

# Front of folder:



#### Back of folder:

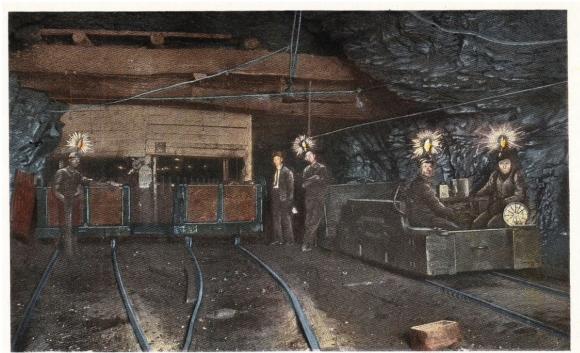


The introductory text at the head of the series:

VIEWS OF ANTHRACITE COAL MINING FROM ACTUAL PHOTOGRAPHS.

#### MODERN MINING.

The purpose of this Booklet is to explain the Method of Mining in the Anthracite Coal Region, showing how mining has been revolutionized within the last few years, the tendency is toward making this dangerous occupation less hazardous and to reduce fatalities to a minimum of late years with the assistance of the employer the miner has devised ways and means for "First Aid," that is, immediate attention to the injured, which often saves lives, whereas the victim would die before reaching the surface and could receive medical attention at a hospital. Mines have been equipped with First Aid Hospitals. Contests are held between First Aid Teams to make them efficient, Oxygen Helmets are in use for rescuers. Electricity is replacing the Mine Mule and with the assistance of the Government, accidents have been few compared with former years. These views explain the process, Coal goes through from its bed in the bowels of the earth till it reaches the consumer.

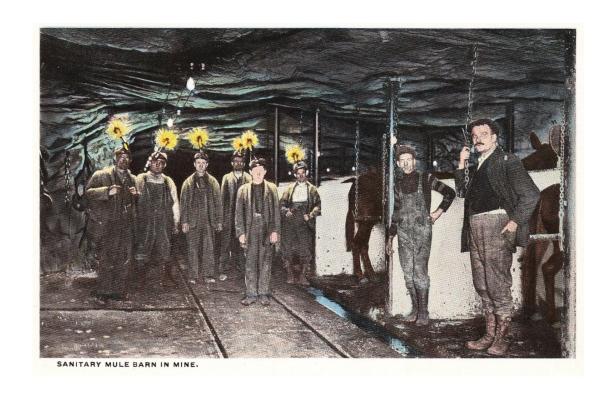


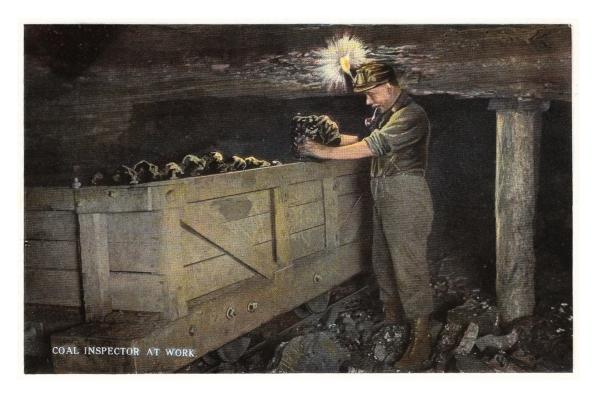
BOTTOM OF SHAFT SHOWING MINE MOTOR AND COAL CARS READY TO HOIST TO SURFACE.

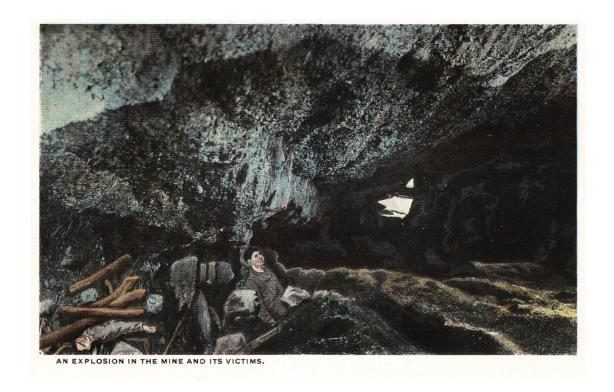


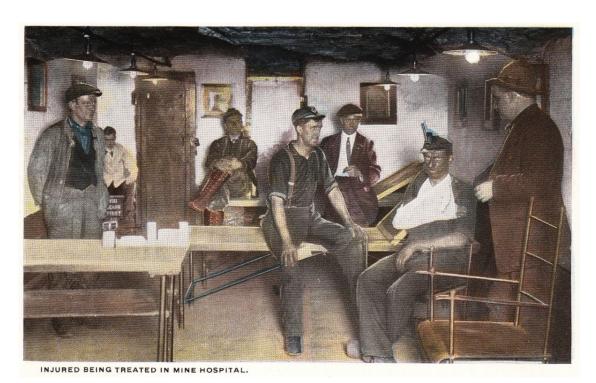


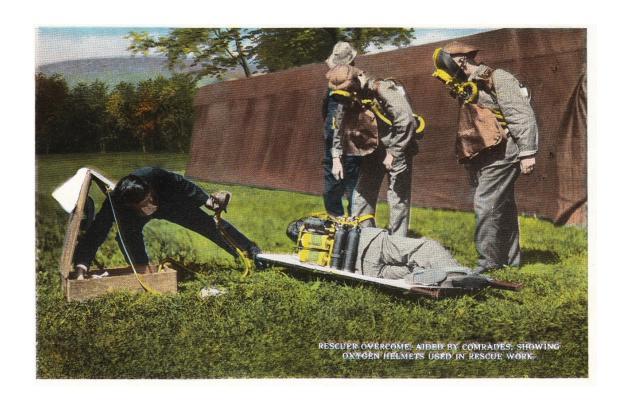








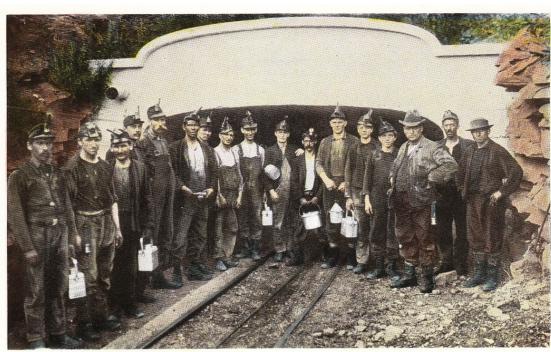








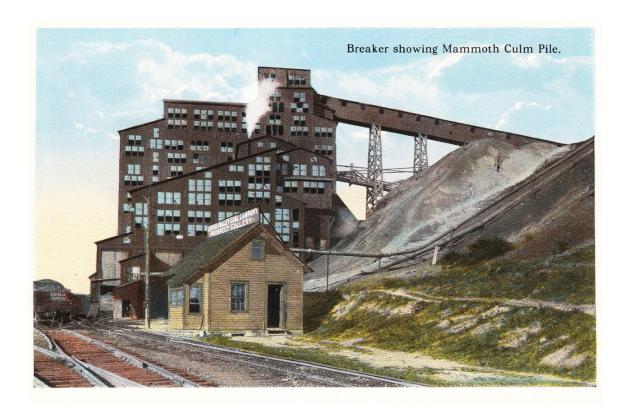
MULES COMING OUT OF MINE AFTER DAYS WORK.



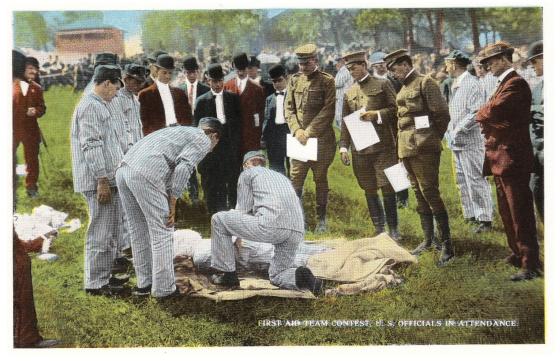
A HAPPY LOT, MINERS RETURNING FROM WORK.

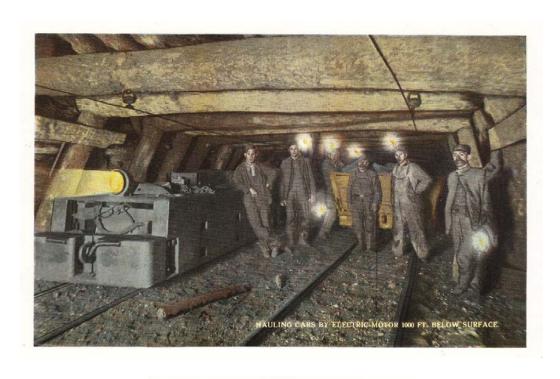


MINE LOCOMOTIVE TAKING COAL FROM SHAFT TO BREAKER.











1713

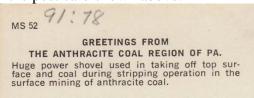
#### **Strip Mining**

Strip mining is similar to ordinary quarrying. Large mechanical shovels are used to remove the soil and rock overlying the bed of coal. This method was used at the Mammoth Vein, near Hazleton, where the vein reached a thickness of 100 feet in some places.

"Strip Mining in Pennsylvania," post card in the collection of the Carbondale Historical Society.



Text printed on the reverse of the post card shown above:



"19722" Number imprinted on the back of the card shown above

Shown below are six photographs of strip mining in Carbondale, in the Summit Gardens area at the top of Canaan Street, Carbondale. This is the area where the Birkett Street playground used to be. In the top two photographs, the view is up the valley, looking toward Simpson.





See note below (p. 120) by Mike Bischak titled "About that culm pile".







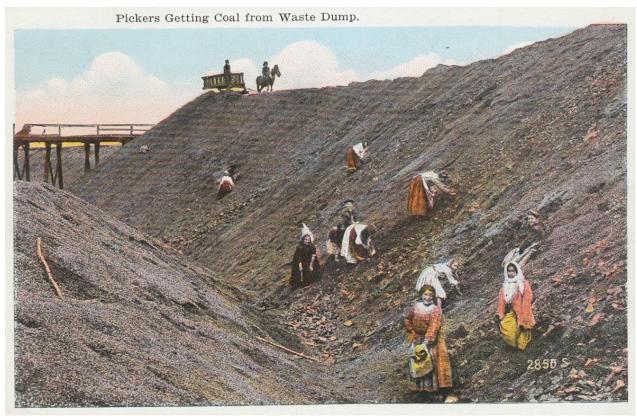


"About that culm pile" by Mike 'Breezy' Bischak: "Nice cover photo on the Feb. issue of the *Bulletin* [Robert F. Collins photo of D&H Challenger No. 1534 at the head of a 101-car WM-3 at Simpson, on March 19, 1950; the "Mechanical Dump" is shown in the background in the center of this photograph]. I spent a lot of time in that spot waiting for trains. Great blueberry picking behind the photographer down along the Lackawanna River. / I have climbed that culm bank way off in the distance many times; you can see all the way to Mayfield from up there when the weather is clear. Locals call it the 'Mechanical Dump', as it was part of the Hudson Coal Company's Coalbrook Colliery above the Midland mine. The culm cars were hoisted up the dump by a cable from a stationary steam engine. The concrete foundation for the steam engine can still be found near the base of the dump. Just north of the photo location was the NYO&W's Northwest Branch, which crossed over the D&H on a trestle (and over the Lackawanna River on a separate trestle) to serve the O&W's Northwest Breaker on a switchback. Lots of history in these here parts!"

#### **Culm Piles**

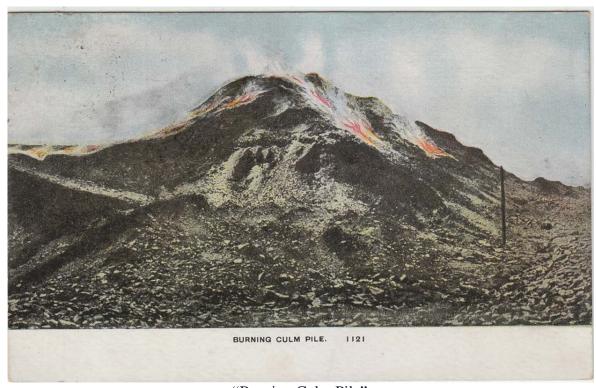
Waste from the process of mining coal and preparing it for market was piled up throughout the anthracite region. These culm piles were also a good source of pieces of coal that got discarded with the coal waste, and sites such as the one shown in the post card given below were a common feature of the anthracite landscape throughout the history of mining.

Post card in the collection of the Carbondale Historical Society; purchased at the Hawley Tom Kennedy Local History Festival, April 16, 2016:



"Pickers Getting Coal from Waste Dump"

Culm piles sometimes caught fire and were major environmental air polluters, as seen in the post card shown below; post card purchased at the Hawley Tom Kennedy Local History Festival, April 16, 2016:



"Burning Culm Pile"

#### Back of the post card shown above:



Post card, titled "Burning Culm Pile," in the collection of the Carbondale D&H Transportation Museum:



Burning Culm Pile

"Burning culm piles in the Mid-Valley, just North of Scranton, seen from Route 6"; photo sold on E-Bay, December 21, 2016. Kodak Color Transparency, dated November 1963; photo by Harold F. Beal, Jamestown, NY



**Ruval Lounge,** seen in the above photograph. An Internet search produced the following: http://www.blakelybears.org/memorials, the Valley View football team. In the "Memorial" (with photo) on that page of Rudy Valentini, Class of 1946, placed there by Donna Valentini (Class of Valley View, 1982), daughter of Rudy Valentini, we read:

"My dad, Rudy Valentini, was a very proud Blakely Bear football player, class of '46. He used to tell my sisters and me how he loved the game and was a very good player. At first, we didn't believe him, he barely stood 5'6" tall, but it was true. We have photos of him playing and recently a photo was in the paper of the All Star team for which he played. He told us of the many Bear Banquets held at his RuVal Lounge on Route 6 [emphasis added]. My father loved the fact that he was a Bear and that love spilled over to the Valley View Football teams. His bar the "Ruval" was a place to meet before and after the Cougar games. / The players of the '92

Championship team donated the field goal post to my dad, signed by all players, which he proudly displayed in the bar for many years. We donated it back to the district to be put in the new facility for all past and current players to see and enjoy. Sadly, my dad passed away in 2004. I hope all his buddies remember the good times spent at my dad's bar. /Donna Valentini, VV Class of 1982"

Thanks to that memorial of **RU**dy **VAL**entini, we know for certain that the burning culm piles seen in the photo given above and the one given below were located in the Mid Valley, north of Scranton.

"Burning culm piles in the Mid-Valley, just North of Scranton, seen from Route 6"; photo sold on E-Bay, December 21, 2016. Kodak Color Transparency, dated November 1963; photo by Harold F. Beal, Jamestown, NY



#### **Independent Coal Operators in the Carbondale Area**

From the very beginning of anthracite mining in the Lackawanna and Wyoming Valleys of Pennsylvania coal mining was engaged in by many independent operators who worked side by side and independently of large corporate entities like the Delaware and Hudson Canal Company.

In the March 18, 1830 issue of the *Dundaff Republican, and Canal & Rail Road Intelligencer*, A. C. Shaver of Russelville (formerly called Lackawanna Hollow), located five miles east of Dundaff, advertized for sale a constant supply of first rate stone coal, for which he would receive in payment either cash or country produce. Here is the text of his space ad in that paper:

"COAL. / A constant supply of first rate / STONE COAL, For Sale / at Russelville (formerly called Lackawanna Hollow) five miles east of Dundaff. / CASH or COUNTRY PRODUCE will be received in payment. / A. C. SHAVER. / Russelville, March 12, 1830." (Dundaff Republican, and Canal & Rail Road Intelligencer, March 18, 1830, p. 3)

Here is A. C. Shaver's ad in the March 18, 1830, issue, p. 3 (also June 23, 1830 issue, p. 4) of the *Dundaff Republican, and Canal & Rail Road Intelligencer*:

Russelville, formerly called "Lackawanna Hollow," we learn from the James Stott ad shown on the following page, was located four and a half miles from Dundaff on the Turnpike Road to Milford at the foot of the Lackawanna Mountain (present-day intersection of the Milford and Owego Turnpike and Route 171 at Simpson).

A constant supply of first rate
SIONE COAL,

FOR SALE

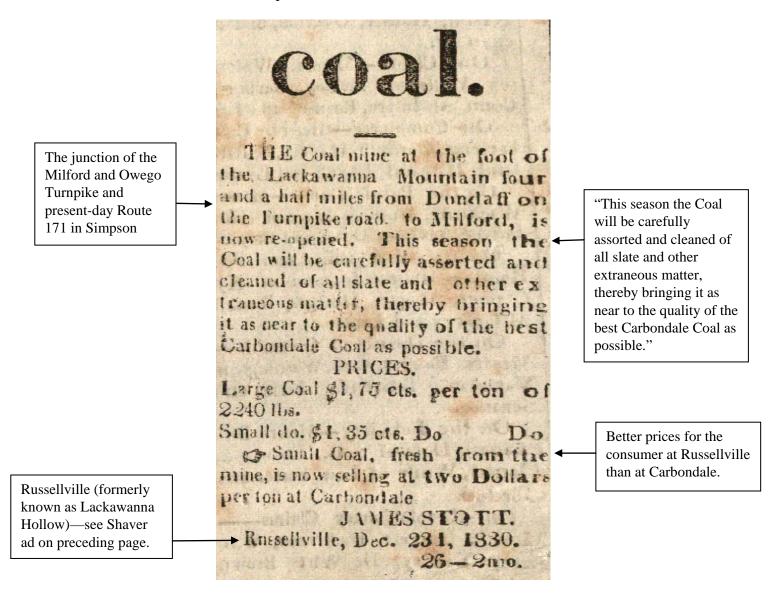
At Russelville, (formerly called Lackawanna Hollow) five miles
Last of Dundaff.

GCASH or COUNTRY PRODUCE will be received in payment.

A. C. SHAVER
Russelville, March 12, 1830.

Was A. C. Shaver a mine owner at Russelville (formerly called Lackawanna Hollow, and located five miles east of Dundaff) who was selling coal by means of this ad? Was he a vendor (possibly he operated a general store?) who, at Russelville, was selling coal mined by someone else? Whatever the case, he announced that he would receive cash or country produce in payment for the coal he sold.

In the December 29, 1830, issue of *Dundaff Republican, and Canal & Rail Road Intelligencer*, on page 1 (with the same ad repeated in the January 12, 1831 issue of the same paper, and in the February 2, 1831 issue of the same paper), James Stott also advertized coal for sale from his mine "now re-opened" at Russellville "at the foot of the Lackawanna Mountain four and a half miles from Dundaff on the Turnpike road to Milford".



Here is the text of the above ad:

"COal. / THE Coal mine at the foot of the Lackawanna Mountain four and a half miles from Dundaff on the Turnpike road to Milford, is now re-opened. This season the Coal will be carefully assorted and cleaned of all slate and other extraneous matter, thereby bringing it as near to the quality of the best Carbondale Coal as possible. / PRICES. / Large Coal \$1.75 cts. per ton of 2240 lbs / Small Coal \$1.35 cts. per ton of 2240 lbs. / Small Coal, fresh from the mine, is now selling at two Dollars per ton at Carbondale. / JAMES STOTT, / Russellville, Dec. 23d, 1830." (Dundaff Republican, and Canal & Rail Road Intelligencer, January 12, 1831, p. 3)

Stott ran the same ad, with an addendum, in the February 2, 1831 and the February 16, 1831 issues of the *Dundaff Republican*, and Canal & Rail Road Intelligencer. Here is that addendum:

"The subscriber / wishes to add to the above that since he commenced mining this season, he has cut through several fault veins, and a number of backs, each of which affected the coal, but the thickness of the vein is encreased; he is pleased to observe that he now finds his coal cleaner of sulphur, and therefore better adapted for Parlour use, and for Iron forges and Blacksmiths than any other mine now open. It ignites freely, and burns pleasantly [emphasis added]. For house use, where consumers of coal have not a proper fire grate and a good strong draught, they need not expect any anthracite coal to please; but with a good grate properly set up, the draught or chimney, sufficiently contracted at bottom and top, any one using the RUSSELLVILLE coal may have during these cold winter evenings, a *pure*, a warm, and a cheerful fire. / JAMES STOTT. / January 26th, 1831"

Here is a facsimile of the complete ad:

Carbondale coal, we learn from this ad, was regarded as the best coal available. Stott's coal, he announced in his ad, was the equal of the best Carbondale coal. "This season," he declared, "the Coal [from Stott's mine] will be carefully assorted and cleaned of all slate and other extraneous matter, thereby bringing it as near to the quality of the best Carbondale Coal as possible."

#### COAL.

THE Coal mine at the foot of the Lackawanna Mountain four and a haif miles from Dundass on the Turnpike road to Milford, is now re-spened. This season the Coal will be carefully assorted and cleaned of all slate and other extraneous matter, thereby bringing it as near to the quality of the best Carbondale Coal as possible.

PRICES.

Large Coal \$1,50 cts. per ton or 2240 lbs.

Small do. \$1, Do Do. Small Coal, fresh from the mine, is now selling at two Dollars per ton at Carbond ale.

JAM ES STOTT. Russellville, Dec. 23d, 1830,

The subscriber wishes to add to the above that. since he commenced mining this season, he has cut through several fault veins, and a number of backs. each of which affected the coal, but the thickness of the vein is encreased; he is pleased to observe that he now finds his coal clearer of sulphur, and therefore better a dapted for Parlour use, and for Iron forges and Blacksmiths than any other mine now open. It ignites freely, and burns pleasantly. For house use, where consumers of coal have not a proper fire grate and a good strong draught, they need not expect any anthracite coal to please; but with a good grate properly set up, the draught or chimney, sufficiently contracted at bottom and top, any one using the RUSSELVILLE coal may have during these cold winter evenings, a pure, a warm, and a cheerful fire.

JAMES STOTT.
January 26th, 1831

Stott "now finds his coal cleaner of sulphur, and therefore better adapted for Parlour use, and for Iron forges and Blacksmiths than any other mine now open. It ignites freely, and burns pleasantly."

At the same time that James Stott was offering coal for sale at Russellville, Thomas Meredith was offering coal for sale coal at his mine one and a half miles South West from Carbondale and less than nine miles from Dundaff.

In his ad in the December 29, 1830 and January 5, 1831 issue of the *Dundaff Republican and Canal & Rail Road Intelligencer*, p. 1, Thomas Meredith offered for sale at his mine, one and a half miles South West from Carbondale and less than nine miles from Dundaff, a constant supply of superior large and small coal. He added: "There is an excellent Turnpike from Carbondale to Meredith's mine and the detention by going there cannot, with ordinary care exceed one hour." Here is the Meredith announcement that was published in the Dundaff paper, on page 1:

December 29, 1830 issue, p. 1 (also January 5, 1831 issue, p. 1) of the *Dundaff Republican, and Canal & Rail Road Intelligencer:* 

In this ad, Thomas Meredith is offering coal for sale, to the readers of the *Dundaff Republican*. . ., at his mine one and one half miles SW of Carbondale. In this ad, the good roads that potential customers might take from Dundaff and elsewhere to his mine are described.

In the 1830s, it must be remembered, Dundaff was the market center of the area and entrepreneurs like Thomas Meredith would, naturally, market their Lackawanna Valley coal, via the only local newspaper in existence at the time (the *Dundaff Republican*. . .) to potential customers at Dundaff.

FOR SALE MR MEREDITH offers for sale at his mine, one and a half miles South West from Carbon. dale, a constant supply of superi-Large Coal for \$1 25 cts per ton Small Do for 75 c's About four miles from Dundaff there is a new road leading by Shantee Town to Carbondale; this will make a good winter road, and the distance will be only seven miles, and avoid the steep Lackawanna hills. There is an excellent Turnpike from Carbondale to Meredith's mine, and the detention by going there cannot, with ordinary care exceed one hour. Mon ey has been subscribed to make a good road from the vicinity of the Wilkesbarre said mine to The distance by this Tompike, route to Dundaff will not exceed mine miles. Mr. Meredith assures the publick, that the Coal he sells shall lie of a quality equal to the best of that at Carbondale and irec from state. Meredith's mine Dec. 224.

Thomas Meredith, by means of this ad, is, in effect, saying: "I have coal for sale at my mine south west of Carbondale. Good roads to my mines exist. Come to my mines and purchase coal."

Here is a typescript of the Meredith ad given above:

"COAL. / FOR SALE / Mr. MEREDITH offers for sale at his mine, one and a half miles South West from Carbondale [emphasis added], a constant supply of superior / Large Coal for \$1 25 cts per ton / Small Coal for 75 cts per ton / About four miles from Dundaff there is a new road leading by Shantee Town to Carbondale; this will make a good winter road, and the distance will be only seven miles, and avoid the steep Lackawanna hills. There is an excellent Turnpike from Carbondale to Meredith's mine, and the detention by going there cannot, with ordinary care exceed one hour. Money has been subscribed to make a good road from the vicinity of said mine to the Wilkesbarre Turnpike. The distance by this route to Dundaff will not exceed nine miles. Mr. Meredith assures the publick, that the Coal he sells shall be of a quality equal to the best of that at Carbondale and free from slate [emphasis added]. / Meredith's mine, Dec. 22d." (Dundaff Republican and Canal & Rail Road Intelligencer, January 5, 1831, p. 1)

Following those initial announcements by Thomas Meredith that coal was for sale at his mine SW of Carbondale, there must have been requests from potential customers that the coal from Meredith's mines be made available at Dundaff. We say that because in the January 26, 1831 issue of the *Dundaff Republican* Thomas Meredith announced that he, and Benjamin Ayres at Dundaff, would receive proposals for drawing 150 tons of coal from the Meredith mines in the Lackawanna Valley to Dundaff. Thomas Meredith, by means of this ad, is, in effect, saying: "Coal from my mines south west of Carbondale will now be available for purchase in Dundaff from Benjamin Ayres"

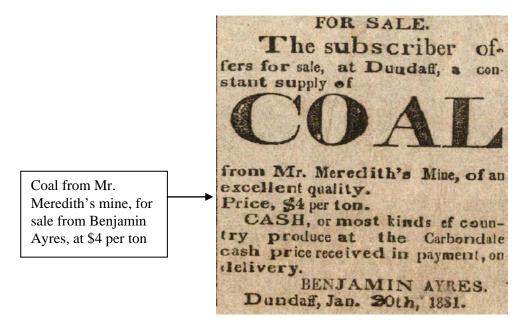
Here is the ad that Thomas Meredith paced in the January 26, 1831 issue of the *Dundaff Republican*, and Canal & Rail Road Intelligencer:

"ATTENTION. / Mr. MEREDITH, will receive proposals at his dwelling house near Carbondale for drawing / *One Hundred & Fifty Tons of Coal* / this winter, (to commence immediately) from his mine; to Dundaff. Cash paid on the completion of contracts. / Mr. Meredith will divide the quantity so as to suit applicants. / Proposals also received by Benjamin Ayres, at Dundaff. / THOMAS MEREDITH, January 14th, 1831." (*Dundaff Republican, and Canal & Rail Road Intelligencer*, January 26, 1831, p. 4)

In that same issue of the *Dundaff Republican*, Benjamin Ayres announced that he had for sale, in Dundaff, coal from the mines of Thomas Meredith in Carbondale. Ayres, it was announced in the same ad, would receive in payment for coal either cash or "most kinds of country produce." Here is a typescript of the ad that Benjamin Ayres placed in January 26, 1831 issue of the *Dundaff Republican*, and Canal & Rail Road Intelligencer on page 3:

"For SALE. / The Subscriber offers for sale at Dundaff, a constant supply of / COAL / from Mr. Meredith's Mine, of an excellent quality. / CASH, / or most kinds of country produce at the Carbondale cash price received in payment, on delivery. / BENJAMIN AYRES. / Dundaff, Jan. 20th 1831" (Dundaff Republican, and Canal & Rail Road Intelligencer, January 26, 1831, p. 3)

On February 2, 1831, Benjamin Ayres placed the ad shown for coal from Mr. Meredith's mine, in the *Dundaff Republican, and Canal & Rail Road Intelligencer* (p. 3). Note that Ayres was offering Mr. Meredith's coal at \$4 per ton, which was more than double the price for coal from Mr. Meredith when bought at his mines in Carbondale. Here is that ad:



Again, in April 1831 (as in late December 1830 and early January 1831) Thomas Meredith offered for sale at his mine "one and a half miles South West from Carbondale, a constant supply of superior Large Coal for \$1.25 cts per ton Small Coal for 75cts per ton."

In his ad (*Dundaff Republican*, and Canal & Rail Road Intelligencer, April 6, 1831, p. 4) Meredith again made it very clear that there was/will be good transportation routes to his mine" for those who wish to buy his coal which, he declared, "shall be of a quality equal to the best of that in Carbondale and free from slate." Here is the ad:

"COAL. / Ms. MEREDITH offers for sale at his mine, one and a half miles South West from Carbondale, a constant supply of superior Large Coal for \$1 25 cts per ton Small Coal for 75cts

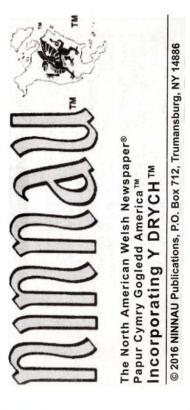
per ton / About four miles from Dundaff there is a new road leading by Shantee Town to Carbondale; this will make a good winter road, and the distance will be only seven miles, and avoid the steep Lackawanna hills. There is an excellent turnpike from Carbondale to Meredith's mine, and the detention by going there cannot, with ordinary care exceed one hour. Money has been subscribed to make a good road from the vicinity of said mine to the Wilkesbrre Turnpike. The distance by this route to Dundaff will not exceed nine miles. Mr. Meredith assures the publick, that the Coal he sells shall be of a quality equal to the best of that in Carbondale and free from slate. / Meredith's mine, Dec. 22d. (Dundaff Republican, and Canal & Rail Road Intelligencer, April 6, 1831, p. 4)

#### **Reese Hughes:**

Rees Hughes, "the pioneer miner of Carbondale, PA", migrated from South Wales to Carbondale with his family in 1833. He entered the anthracite mines as a boy, became a mine boss, an owner-manager, and then traveled extensively as a mineral prospector and consultant.

Between June 13 and February 1914, the 85-year old Rees Hughes published his reminiscences in *The Druid*. Those reminiscences were published in *Ninnau* in 2016-2017. Here are those reminiscences as published in *Ninnau*:

## "... Pioneer Miner of Carbondale, PA"



## Reminiscences of Reese Hughes (1827-1918), Pioneer Miner of Carbondale, PA

Edited by Ronald L. Lewis

Reese Hughes was born May 9, 1827, near Swansea, Wales; he identified Landore as his hometown. In 1833, Reese's grandfather, Rear Admiral Edward Hughes, arranged passage to America for Reese's father, William Hughes, his wife, and their six children in the hope that they would find a better future in the New World. The new arrivals entered the port of New York in August 1833, and then settled in what became Carbondale, Pennsylvania. Major deposits of anthracite coal had been discovered there, and the region was on the eve of rapid development as a major center for the production of coal and iron. Reese's life and career paralleled the industrial boom. He entered the mines as a young boy, and became skilled in a number of mining-related occupations, eventually becoming a mine boss, and then a company chief-executive-officer and owner. He also traveled extensively as a mineral prospector for several companies, and established hard-rock mining operations in Virginia, North Carolina, California, and

Mexico.

Although he was obviously fluent in English, Welsh was probably his native tongue since he states that everyone among his group bound for America came from the same area and could freely converse. He also enjoyed hearing sermons at the Welsh church delivered in the



The Venerable Welsh Patriarch of Carbondale Whose Memory

language of his fathers. The family maintained contact with other family members in Wales. In December 1841, William Hughes returned to visit his father in Swansea and remained eight months. Reese and his wife Margaret also visited his grandfather, still vigorous at 87, in March 1853. During their ten-month visit, Admiral Hughes introduced the couple to many people, and conducted them on a tour of their Welsh homeland.

Reese did not have the benefit of a formal education and stated that at the time of his visit to Wales he felt handicapped by being "illiterate." At some point, however, he clearly learned to read and write in English; the 1880 federal census indicates that he was literate. He would not have been able to function in his numerous positions otherwise, and Mr.

Hughes did pen his reminiscences. They chronicle the passage of a Welsh family to America, and the great geographic and social mobility of their generation as they rode the rising tide American industrial power. He personified the nineteenth-century American doctrine that native intelligence, ambition, and sober hard work would carry a person to economic success. Although he was more successful than most, the life of Reese Hughes demonstrates how ethnic networks facilitated Welsh industrial immigrants to improve their economic status in America.

The Druid, an English-language paper for Welsh Americans, published the eighty-five year-old "patriarch's" reminiscences in five chapters between June 1913 and February 1914; he died four years later on April 9, 1918. The chapters of his life make for interesting reading, but they also echo some distinctive features of the broader Welsh experience in America.

experience in America.

Note—My friend, the Rev. D.

E. Richards, M.D., of Scranton,
Pa., having heard me relating incidents of my life and travels during the past eighty years, and over in America, has pressingly requested me to put the same in some such form as would be equally interesting to the vast number of Druid readers, as they were to him.

The series of letters by Reese Hughes will be published starting in the May-June issue of Ninnau.

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March-April 2016

NINNAU

#### Chapter 1. "Eighty Years Ago in Carbondale, Pa.; Remarkable Experiences of Reese Hughes, Who Came With the Pioneers; Early Days of Coal Mining."

Reese Hughes migrated from South Wales to Carbondale, Pa. with his family in 1833. He entered the anthracite mines as a boy, became a mine boss, an owner-manager, and then travelled extensively as a mineral prospector and consultant. His friends convinced him to commit his life story to paper, and between June 1913 and February 1914 the eighty-five year old Hughes published his reminiscences in The Druid, a Welsh American newspaper. They appeared in five chapters one of which is reprinted below.—Ronald Lewis

Carbondale, Pa.—I thank you for your invitation to write some of my early recollections of this section of Pennsylvania, but my memory is not now so responsive. I well remember, however, in 1831, now 82 years ago, when John Thomas, a school teacher, from Aberdare left for America with a friend. He was a very ambitious man and had been told that there were fine opportunities for a school teacher in the new country. He was accompanied by a friend, another teacher from Rhymney, who was going to Utica, N.Y.; even in those days a wellknown Welsh center. When he landed in New York he [Thomas] was informed that coal had been discovered in large quantities in Luzerne County, which then reached from Carbondale to Schuylkill, and embraced the territory in which we now find Carbondale, Scranton, Wilkes Barre, Scranton, Wilkes Barre, Hazleton and many other large cities. Carbondale, however, was the chief city in those days and it was for this point that Mr. Thomas and his friend made. He thought that there would be a large body of miners there and an excellent opportunity to open a school. However, he found that while there was an enormous amount of coal to be mined there were no miners there and no school system. Although he had come from a



The Venerable Welsh Patriarch of Carbondale Whose Memory Is So Clear.

mining town he had no knowledge of mining. He spoke, how-ever, of the large number of miners working in Wales for long hours and small wages who, doubtless, would be glad to know of the conditions and would avail themselves of the opportunity to open a new territory. He was prevailed upon to return to Wales and was given eighteen months to make the trip. That sounds odd in these days when it takes but four days to make the trip from land to land, but in those days we depended upon the wind for speed, and the wind was not always favorable.

Mr. Thomas returned to Wales as soon as possible and reported the finding of an immense bed of coal and that land was given free to miners and their families. They were also to have the timber which was growing on the land and at the public meetings which he held throughout Wales, he described the wonderful tracts which were ripe for the harvest. My father attended one of these meetings in Treforest, near Swansea, decided to join the rest of the emigrants and seek his fortune in a new world. His father was Admiral Hughes, of the English Navy and he paid our passage to New York, there being six children in our party at the time. We came in a small vessel known as the 'Elizabeth Clark'. The steamers of the pre-

sent day have a displacement of more than forty thousand tons, while our vessel was only 600 tons and belonged to Lord Vivian, the great copper and tin manufacturer of those days. We started on July 22<sup>nd</sup>, 1833, when I was six years old. There were 87 passengers aboard, all Welsh, and we landed in New York on August 28, having spent seven weeks and four days on the ocean, yet we thought that we had made a good voyage. It took us five days to come to Carbondale, a very good record as it was a hard journey up the Hudson River to Rondout, and then over the old Erie Canal. There are now only two of us living who made that trip in the 'Elizabeth Clark', Mrs. Thomas Reynolds, of Forest City, Pa., and myself. There are two sons of John Thomas, who are now old men residing in Susquehanna County.

This was the first emigration of the Welsh miners to this country. From Carbondale they scattered all over the land and many found their way to Schuylkill County, where the great seams of coal were discovered and have not yet been worked out.

I could write a volume of the early days of these pioneers and their fearful struggles against privations, wild animals, and many other dangers of which we have now no knowledge. The spirit of the country has changed. We walked miles in those days to attend church services through a lonely wilderness scarcely trampled by the foot of man; but what a refreshing joy it was to hear the dear old gospel in the language of our own country. I remember that the first year we were unable to work the mines owing to a lack of water and the Welsh miners were sent in a body to the watershed to dam up the streams so that we could get a supply of water.

The different families were given tracts of land in the wilderness and these farms, about the best in the country, are still in possession of some of the families. This is how we got 'Welsh Hills', which is the home of the descendants of the old Welsh pioneers. Then we have Gibson, Uniondale and many other surrounding villages populated by the grandchildren and great grandchildren of the same hardy old miners who opened up such a vast field of

wealth for this nation.

Many, however, moved early after arriving and many settled in Spring Brook, a place which attracted the home sick ones as it was so like Gwalia Wen they had left.

We had quite a number who traveled to and fro, between this country and Wales, and they told stories of the wonderful wealth of coal and the high wages paid and soon there started a remarkable stream of emigration which rapidly emptied the coal fields of Wales.

Scranton became the mecca of the Welsh miner, and in a short time there were thousands settled on the West Side and the South Side which became known as the 'Welsh Athens of America'. Benj. Hughes, who became the general mining superintendent of the Lacka-

wanna Company, was more instrumental probably than any other man in aiding in this emigration of the Welsh miner, as he promptly found employment for everyone who arrived in that city. Mr. Hughes was a remarkable man as he insisted on everyone joining and attending church as soon as he gave him a job. If possible he drafted them into the Welsh Baptist Church, which became and is today the strongest Welsh Baptist Church in the United States.

Nearly all the Welsh mining bosses of those days were good religious men who would go into the mines to see the men who had neglected services the Sunday previous. They were not content with the men attending one service, but insisted upon their attending the morning and the evening sermon and Sunday school in the afternoon and frequently singing school in the meantime. Sunday was in some respects a hard day as these old bosses believed in spending the whole day in church. They also made the pastor work as well. It would not be a bad idea if we had some of the spirit of these old time bosses in the present

You heard no talk of graft in those days. There was little drunkenness. We worked harder, but we were just as happy as the people of the present generation. We did not hear so much of nervous prostration and other ills that the flesh is heir to. In fact, I believe that the people looked better and healthier and certainly the women looked as attractive and as handsome in the more sensible modes of dressing as the young ladies of the present day appear to their sweethearts. It was a more sane age

I thank the Lord for all His goodness to me; that He has permitted me such a long life in this old world. I have seen marvelous progress. When I came here the telegraph, the telephone, the wireless, the steam engine, the typewriter, the linotype machine, the automobile, the flying machine and all the many other wonderful contrivances and inventions were unheard of. 'Oh, Lord, how manifold are Thy works."

(This series of letters will be continued in the July-August edition of Ninnau)

# Chapter 2. "Eighty Long Years In The United States; A Primitive Ocean Voyage."

Reese Hughes migrated from South Wales to Carbondale, Pa. with his family in 1833. He entered the anthracite mines as a boy, became a mine boss, an owner-manager, and then travelled extensively as a mineral prospector and consultant. His friends convinced him to commit his life story to paper, and between June 1913 and February 1914 the eighty-five year old Hughes published his reminiscences in The Druid, a Welsh American newspaper. They appeared in five chapters one of which is reprinted below.—Ronald Lewis

My grandfather, Edward Hughes, a Rear Admiral in the British Navy, was born in Glamorganshire, south Wales, in the year 1765, and died in 1857. His wife, Martha Bonner Hughes, was born in Bristol, England, in the year 1768, and died in the year 1855. Both passed away at Swansea, S.W.

My father, William Hughes, was born in Bristol, England, in the year 1793. Soon after his birth he was taken to Wales on account of his father going away to the far ends of the earth, and was domiciled with a farmer by the name of Rees Tymawr (Big House), about four miles outside of Swansea, between Morriston and Llangyfelach.

After eight years or more he was sent to London to be educated, but so lonesome and homesick was he that he returned, and in due course married Martha Jenkins, of that neighborhood, in the year 1811. His brother-in-law was a boss in the copper works where father had secured employment.

In the year 1830 my grandfa-ther retired from the Navy and made his home in Swansea. And it was in this year that a man by the name of John Thomas, a friend of his, both school teachers in the neighborhood, sailed for America. After arriving in New York, Mr. Thomas learned of coal mines having been started in Carbondale, Pa., and determined to wend his way thither while his friend, less venturesome, went to another friend, a school teacher by the way, in Utica, N.Y.

As there were no practical



he Venerable Welsh Patriarch of Carbondale Whose Memory Is So Clear.

miners in Carbondale at this time, mining was of necessity very crude, reckless and unsystematic. Consequently, in the year 1831 this John Thomas was sent back to Wales to secure some miners who understood their work and brought them over [to Carbondale] with him. He was gone fifteen months and traveled through Wales, Scotland and Ireland, picturing in glowing colors the great prospects of the American country wherever he went, and kindling great excitement for emigration. Father attended one of the meetings in Landore (our town) and caught the fever, which did not abate until he had seen his father at Swansea, who looked favorably upon the project and proposed to pay our passage, as a family, to New York.

We were eight in number, father, mother and six children-four boys and two girls, of whom I alone am left. The migratory fever ran exceedingly high for some time and a list was made of those who were in earnest, and who would go when provision for sailing was completed. Business was not brisk in the copper and tin works of the Tawe Valley at the time, and Lord Vivian, owner of the works, having one of his ships, 'Elizabeth Cook', then at anchor in Swansea Bay, offered to rig it up to take us to New York.

The offer was accepted and the little sailing vessel of six hundred ton burden was gotten ready. She had been used in plying cargoes of tin, copper and ore to and from ports of easy access, and had never been farther than the ports of Europe. Think of getting that 'ready' to take us to New York!—and compare it with the gorgeous palaces plying between the Old and New world today, affording the passengers every luxury of land and sea!—Surely the people of this day and generation cannot have the faintest idea of what crossing the ocean meant in those days.

The readiness referred to comprised of wooden benches and rough, rude bunks of the same material. Eighty-seven passengers got themselves ready, which was the greater part of the readiness, for we had to furnish our own beds and food provisions, the ship and crew not pretending to do anything more than keep us above water, providing there would be no storm during the voyage!

The imminently looked-for day arrived at last, July 2<sup>nd</sup>, 1833, and we started from Swansea amid varied scenes of crying, weeping, shouting and feelings deep in every breast, which would battle the most daring imagination and the most feelle pen at portraval

facile pen at portrayal. Well do I remember the time and the occasion, although I was but six and a half years of age. I did not realize the situation more than some other child of the same age and capacity, all I felt was the new experience, and it sufficed for a few days until we went from the sight of land and things in general became monotonous. But all the eighty-seven passengers were Welsh from the same immediate neighborhood and consequently we could converse one with the other and were more as members of one family than anything else. The voyage was of necessity after the manner of voyages of those days.

Fifty-seven days we were on the ocean, and on the twentyeighth day of August, 1833, we landed in New York City.

[The Druid, 11 December 1913, p.3]

To be continued in the Sept-October issue of Ninnau as part on an ongoing series.

## Chapter 3. "Robbing Pillars

#### Reese Hughes Describes the First Cave-in Known in the Anth

Reese Hughes migrated from South Wales to Carbondale, Pa. with his family in 1833. He entered the anthracite mines as a boy, became a mine boss, an owner-manager, and then travelled extensively as a mineral prospector and consultant. His friends convinced him to commit his life story to paper, and between June 1913 and February 1914 the eighty-five year old Hughes published his reminiscences in The Druid, a Welsh American newspaper. They appeared in five chapters one of which is reprinted below.-Ronald Lewis

In December, 1841, a letter came to father from his father in Wales, asking him to make a trip back to report all he knew about America. So in April the following year father went and was gone eight months.

He returned with a present of fifteen hundred dollars from his father, and bore also a communication for Mr. Thomas of the rolling mill Slocum Hollow.

Mr. Thomas advised him to buy a lot and build a home and that he would give him and his sons work so father bought a lot of Samuel Slocum for twentyfive dollars across the roaring brook, where the Laurel Line station is now in Scranton, Pa., and built a house that summer. 1843. In the fall we moved from the farm and I worked with John Coleman, blacksmith, as a striker, while father started some coal mining for the rolling mill. The mill was located close to where the Laurel Line has its electric plant now. A nail mill was built adjoining the rolling mill, and in the winter of 1844 and '45 I heated the plates for the nail machine.

The next winter I had changed my occupation and was driving in a little mine where the Diamond is now on the West Side, working with Thomas Williams—Twim Beili

as he was called—for Benjamin Trip, who supplied country farmers with coal as well as the people living in what is now North Scranton.

Mr. Tripp also provided the people with lime for he had a kiln above where the D.L. & W. Railroad crosses North Main Avenue at present. A four-horse stage plied between Carbondale and Wilkes-Barre at this time and it passed us daily about 10 A.M. One morning in March, 1846 it brought news that the Carbondale mines had caved in and that many men were killed.

I immediately looked for an old cutter, for the snow was thick on the ground, and hitched the mule I had in the drift to it and started up in company with Tom Williams because my brother William worked in the dip and Twim Beili's brother worked in No. 1. Twim was fond of his drink and the result was we had to stop at ten mile tavern then at eight mile-old Lilliebridge and again four mile, which is now the town of Jermyn, in consequence of which it was eight o'clock in the evening when we arrived at Carbondale.

The cave in had taken place in No. 1 and the pressure of the air had blown coal dust all over the West Side Shanty Hill. I remained in Carbondale over two months helping to find the dead and clearing up the mine. Mr. Tripp's mule I sent back by William Bronson's nigger hostler! The number killed in this mine calamity was seventeen, all Irish with the one exception of Ebenezer Williams, my friend Twim Beili's brother. His body was found on the fifth day, nine others were all we got out and these nine were buried at the Catholic church, where the present parsonage now stands; the bones were removed to the new cemetery back of Welsh Hill when the parsonage was erect-



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ed.

This was the first mine cave in in the country and was caused by reckless mining, for no pillars at all were left to support the roof. The experience was a new one and consequently doubly tragic, a dense pall had fallen both on the minds and hearts of the people, and it was a long time before [they got over it].

William Maxey, Jenkins, Enock Jones and some others of the elderly men, in going into the mines that morning, and who were not caught under the falling roof, had the experience of their life. Their light was blown out and they lost their way, and giving up their effort they held a prayer meeting in the dark. They were rescued in due time, and old Enock Jones delighted to relate the story as long as he lived, pointing out the providential care of God over His beloved.

In July, 1846, father leased Thomas Price's mine at Pittston, Pa., for so much per ton delivered on board the canal boats, and I worked there with him for some time. In the spring and summer of 1847 a malarial pestilent-fever and ague raged from Pittston to Nanticoke. Every person shook, and it was

## Seventy Years Ago"

#### racite Region; Took Place in Carbondale.

said that the dogs shook in the streets, raising the dust therefrom! It proved a dire calamity to us, for on August 28 my mother died, was taken up to Carbondale to be buried, there was no cemetery at Pittston then, and our home was broken up, sister Mary Ann going to New York and father to Carbondale to sister Martha Morgan. I went to Pottsville, Pa., and secured work at Eagle Hill, near Five Points, where I sank a slope for Mr. Oliver in the spring of 1848, and drove a heading for Mr. Parker at New Philadelphia in the summer.

The war with Mexico was now on and a company of twenty-three of us enlisted. I should have stated that it was here in Five Points I was baptized into Christian fellowship by the Rev. William Morgan, pastor of the Baptist church of Pottsville, Pa. The company of raw soldiers was ordered to Harrisburg-the canal between Pottsville and Reading had newly been opened, on which we rode between the two points, then walked from Reading to Harrisburg, a distance of fifty miles or more.

We camped in the capital grove for three weeks without arms or ammunition, and the result was, word came that the war was over and we returned home!

I worked some time at Beaver Meadow, Pa. In the spring of 1849 father prevailed on me to come and build a house for him on the farm at Welsh Hill, Susquehanna County, Pa., which I did, then went to work in the mines at Carbondale, where I got married in 1850. My brother-in-law was hurt in the mines about this time working in a chamber as pusher for Thomas Phillips (Cyw Ionagwr), father of our well known Col. Phillips, general manager of the mines for the D.L. & W. It was the spring of

this year a calamity occurred in Carbondale by the bursting of Durfes' dam on Recett Brook, flooding then broke over the river bank and rushed down the slope into the mines.

William and David, two sons of William Davis called Will Caerphily, were working in No. 6, heading on the basin line, the freshet caught them with no place of escape, and they were both drowned. Mr. Harris, the mine foreman sought volunteers to get them out. The water did not subside sufficiently for anyone to go in for some days, anyway. Miles Edward and myself volunteered. We had to go through water to our waists and higher than that in many places. We found them at last, having crawled to the top of a cave in an old chamber and had died in each other's arms. There they were stiffened and it was a difficult job to separate them. They were 27 and 23 years of age respectively, the only children of their parents and living at home. I shall never forget the poor mother; she was frantic beyond compare, and William Maxey and Samuelo Jones holding her and trying in vain to console her.

The funeral was the largest, up to that time, seen in Carbondale.

In the fall of 1852 I received a letter from my grandfather asking me to visit him in Wales. So, on March 1st, 1853, after a week's visit with my brother, Joseph, in Philadelphia, my wife and I sailed from that city on the 'S.S. City of Manchester' and landed in Liverpool March 17th, putting up at the Welsh Harp Inn, where the renown blind harpest Dick Dywyll was celebrating St. Patrick's Day! (to be continued)

[The Druid, 8 January 1914, p.2]

## Chapter 4. "Rough Life of the Mining Pioneers; Reese Hughes Speaks of the Troubles Incident to Camp Life and the Early Days of the West;

Dinner with Lord Vivian."

Reese Hughes migrated from South Wales to Carbondale, Pa. with his family in 1833. He entered the anthracite mines as a boy, became a mine boss, an owner-manager, and then travelled extensively as a mineral prospector and consultant. His prospector and consultant. His friends convinced him to commit his life story to paper, and between June 1913 and February 1914 the eighty-five year old Hughes published his reminiscences in The Druid, a Welsh American newspaper. reminiscences in The Druid, a Welsh American newspaper. They appeared in five chapters one of which is reprinted below.—Ronald Lewis

The voyage from New York to Liverpool was vividly resurrected in my mind by the terrible calamity to the Titanic, for we were caught in ice floats.

we were caught in ice floats among the mountainous bergs and were detained for six hours. Fortunate we were that both the wind and sea were calm. The S. S. City of Glasgow traveling in the opposite direction to us was lost at the time, and doubtless among the icebergs we encouned such a company, style and occasion, my predicament can be imagined much easier than I can picture it; the desire uppermost in me was to have a knothole in the floor and crawl through it somewhere out of sight. However, grandfather said that I had acquitted myself very well!

We visited London and some of its chief attractions, and grandfather, as a retired Admiral, was presented to the Queen in Buckingham Palace and she told him that she did not remember seeing an admiral before in the 88<sup>th</sup> year of his

age. In January, 1854, we sailed for home, bringing with me grandfather's mahogany chest of tools, instruments and some relics which I have in my possession to this day.

Landing in Philadelphia we visited for some days with my brother, Joseph, of the Columbia Iron Works, and then by train to Tamaqua, Pa., where I met Ed. Morgan, one of the boys in the company at Harrisburg for the Mexican war! He was the mining boss for Mr. Bowman and gave me a good job robbing pillars [the dangerous job of removing pillars of coal that supported the mine roof before a section was abandoned] where I made excellent pay.

After that I took contracts under John Powell, assistant superintendent for the Lehigh Valley Coal Co., where I was advanced to be a mining boss. Not satisfied with fifty dollars a month pay for that work, in the fall of 1856 I undertook to sink a shaft for the Passaic Company in Luken Valley, four miles from Bethlehem, Pa., the shaft, however, did not prove successful, but I found a good deposit of zinc ore about a quarter of a mile distant. In August, 1857, I assumed charge of the Ogdensburg Zinc mine in Sussex County, New Jersey, for



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the same company, and in the same year I discovered the Hematite iron ore vein two miles from Hellertown for the Hockendaqua Iron Company. This was one of the busiest years of my life, for after this that I have related I was sent, in October, to Davidson County, North Carolina, to open a zinc and lead mine, called afterward the Silverhill Mine, and which was very rich in both zinc and lead. Here I had to engage slaves from their masters on the plantation to do all the menial work of the mine. In 1858 I discovered the Davidson Copper Mine for a company in Baltimore, Maryland. These mines proved very successful until the James Buchanan panic a serious financial recession that struck the nation in 1857 the same year Buchannan took office as U.S. President] demoralized everything in the year 1859, when I was ordered to close the mines, stop everything but the pumps, and sell the horses. Then I came North and went prospecting in the Adirondacks for Messrs. Hall and Brady of New York City, and discovered a good sample of graphite (black lead) near the outlet of Lake George, eight miles from Ticonderoga on Lake

I found my grandfather well at the advanced age of 87, in which year I find myself now since last April. Nevertheless, he was spry both in body and mind, and as keen as ever for news of the great country across the Atlantic. We spent nine months with him, traveling through various parts of Wales, England and we visited Cork and [the premises] of Killarney, in Ireland.

I was honored, in company with my grandfather of course, with an evening dinner in the palace of Lord Vivian, who twenty years previous had rigged up his Elizabeth Cook to carry us to New York.

Fourteen of his special guests were in attendance, two of them from London, and I served as the special but of questions concerning America—its modes and customs. Being illiterate and never before having attend-

Champlain. After this, in company with Charles P. Williams of Philadelphia, I discovered the first nickel ore in America in Lancaster County, Pa. We did not know what it was and could not find out until we came across an old Swiss chemist in Newark, N.J. who analyzed and reduced some of the ore for us. Then Joseph Warton, of Philadelphia, for whom I was working, built a smelting works at Camden, N.J., which proved very successful, for Mr. Warton induced the government and contracted with it for so much nickel to be used in currency and which is used to this day. About this time Mr. E.K. Garretson of New York City desired a man to go to California to open a gold mine and put up a quartz mill. Mr. Weatherall, secretary of the Passaic Company granted me a leave of absence for a year, and I started for California taking with me three men, Thomas Morgan of Tamaqua, Evan Wildin of Summit Hill, and Thomas Williams of Friendship, Lehigh County. We went by boat from New York city down to Aspinwall, then crossed the Isthmus of Panama on Mexican ponies to the Pacific and then by boat to San Francisco. It took us twenty-three days from New York. I had a map of the claim and location, which was on the first plateau of the Sierra Nevada Mountains, near the Little Silver Creek—a tributary to the South Euba River five miles below. We had a great trouble to find it and some hardship in starting to work for it was fourteen miles from the nearest camp. Two teams of oxen were used to carry supplies from Marysville, sixtyeight miles away. We worked hard and on October the 9th the mill was put in operation by water power-18 feet wheel and a sixteen stamp battery. The venture proved very successful throughout.

November the 4th was Lincoln's first election, at the mine we were fourteen men and we all sent our names, as requested by the Justice of the county capital, and voted by proxy for Lincoln. On December the 3<sup>rd</sup> a general cleaning up was instituted at the mill for we had worked it now six weeks and two days, and the result was we cleared \$6,215. The snow by this time was very deep-five feet on the mountain and much deeper in the canyon. However, it interfered but very little with our work for we had the camp well stocked with provisions, and the little travelling we did from it was on Norwegian snow shoes.

On March the 12<sup>th</sup> Mr. George Bissell took charge for my time was up, therefore I left for the East and landed in New York City, April 10<sup>th</sup>, 1861.

The atmosphere here was surcharged with rumors of war, and I was ordered immediately by the company in New York to North Carolina to place five tons of powder in the Silverhill Mine to blow it up should it be confiscated. I was there three weeks doing the work and after instructing John Udy the pump on what and how to do in the emergency, left for New York, when, to my horror, on arriving at Portsmouth the blockade with Confederate marine vessels was on. I was forced to remain here more than three weeks, and I was in a terrible state of mind fearing lest my career would end in the southern army by conscript. However, fate would not have it to be so, by a little diplomacy on my part with one of the chief officers of the marines who visited the hotel where I stayed, daily, and his sympathy, of course, and the aid of some prominent men in New York, I got back safely. (to be continued)

[The Druid, 22 January 1914, p. 7]

### Chapter 5. "Last Chapter By Reese Hughes; Carbondale Pioneer's Graphic Description of Stirring Experiences in the War Times; His Trip to South America."

Reese Hughes migrated from South Wales to Carbondale, Pa., with his family in 1833. He entered the anthracite mines as a boy, became a mine boss, an owner-manager, and then travelled extensively as a mineral prospector and consultant. His friends convinced him to commit his life story to paper. Between June 1913 and February 1914 the eighty-five year old Hughes published his reminiscences in The Druid, a Welsh American newspaper. They appeared in five chapters the last of which is reprinted below.—Ronald Lewis

by the health board. I returned to the mines. Two days later I was ordered to the office of the company in New York. Our head clerk said to me that he was at Allentown engaging a substitute, but did not state the cost.

From this time on I forced the mine with all the men I could hire. Our product was from twenty-five to thirty tons per day of zine oxide and from fifteen to twenty tons of lead and oxide paints, during the following seven years to 1869 the engines hardly stopped at all. In March 1864 another call for 300,000 men came. Col. Weatherall was on furlough at the time and he visited the mines. I asked him if I would be subject to draft again after having had a substitute, to which he answered that I was in the same shoes as my substitute was before he took my place. Anyway, he advised me to form a company of the men at the mines as State Reserves, then we would be called when the state would be invaded by rebels. I immediately organized a company of twenty-two of my men. July 3rd, the rebels entered the state and we were ordered out, we arrived at Harrisburg the next evening and camped in the grove at the Capitol.

The enemy had burned the

The enemy had burned the bridge over the Susquehanna and destroyed the arsenal at Carlisle with all the ammunition. It was on Tuesday evening we started for Gettysburg, marched through Cumberland Gap, and got in sight of the place at 5:30 in the morning.

Rations for breakfast were ordered at once, and at 6:30 we were ordered in line for battle for it was reported that Lee would flank General Mead west of Gettysburg and meet us. About seven thousand reserves



The Venerable Welsh Patriarch of Carbondale Whose Memory

were in line and we could hear the great firing but could see nothing save clouds of smoke, about two miles away, as I thought. We remained in line all day, when, in the evening we were informed that General Lee and his men had retreated towards Chambersburg and Maryland. We slept there all night ready for a call. At 6 A.M. all was quiet and I hunted up the Field Marshall and got a receipt for my presence with the Lyken Valley Company. Three of us spent two days looking over the battlefield, and it was the most heartrending sight imaginable. In the ravine back of Round Top rebel corpses lay four and five over each other having been slaughtered by General Mead's battery from Round Mead's battery from Round

Top.
Thousands were strewn over fields while other thousands of wounded lay in barns and sheds whose cries and groans could be heard at a distance.

My brother Joseph had been living for some time at York, Pa., and I desired to call on him so we three returned by way of York while all the rest went to Harrisburg for their discharge.

On reaching my brother's home, it was to find that he had been buried about seven weeks previous. I proposed to take his widow and two children with me, but she refused. The two children are living still, one in Scranton and the other in Wilkes-Barre, Pa.

Wilkes-Barre, Pa.

We returned to Lyken Valley to the mines where no delay had been on account of our absence save for the lack of men. There was a letter waiting me with orders to come to New York immediately. The general manager, Mr. Horace Trumbul, had resigned and left and I was advanced to the vacant position as manager of both the factory and the mines. I moved to Cummunipaw in Jersey City to be near the works, which were kept going at their full capacity; it was a very successful period with the business.

In 1869 Messrs. Samuel

In 1869 Messrs. Samuel West, George Durfes and myself ventured in the Ready Mixed Paint business, I as a silent partner because of my connection with the Passaic Company.

In January 1870, by the urgent desire of Prof. Chandler, New York State Geologist, the Passaic Company granted me ten weeks leave of absence to accompany him and inspect a silver claim in Mexico. We went by steamer to Central America, crossed the Isthmus by train then by steamer from Panama to Mansanilla on the Gulf of Tohontopeck. Out train from there was Mexican ponies for 123 miles. We had a Spanish-American guide and twenty-eight Spaniards to convey our equipment.

vey our equipment.

A very rich vein of silver ore was discovered at Lazaro, but owing to the distance for transportation and cost of building in a wilderness, it was left to lay

for the present. Later the United States Express Co. got possession of it. On our return we arrived in New York on April 22<sup>nd</sup> after a most delightful trip among the amazing wonders of the tropics.

On my return finding my boys with little ambition for business I bought a big farm on Welsh Hill, Susquehanna County, Pa., and moved my family there in May. On June 21 I went to North Carolina to pay the men and inspect the Silver Hill mines and when there I received a telegram from Mr. West to the effect that our paint works had burned down at a loss of \$28,000 and no insurance. In my depressed condition of mind, I left New York to live of hind, I let New York to live on the farm; men were engaged to instruct the boys in farming, while personally I took to build-ing houses and barns in the neighborhood. This went on for years until finally I sold the farm and moved to Carbondale where I engaged in prospecting, mining and building breakers, doing fairly well up to 1909 when I retired. In 1911 lost my partner in life, my beloved wife—the greatest loss of all— and since then my daughter and her family moved into the homestead with whom I have made my home. I surely am grateful to God, the father of us all, for His great goodness, mercy and protection through the various vicissitudes I have passed during my long life, and I hope and pray for His blessing now to the end, which cannot, of necessity, be very far distant.

Yours very truly,

Reese Hughes
[The Druid, 5 February 1914, p.6]

The war was on and times got brisk, and especially great was the call for paint by the govern-ment. Consequently our zinc mines were working to their utmost capacity. When the call for the first seventy-five thousand men came from the gov-ernment, this did not disturb us at all. But when the second order came in March 1862 for 300,000 men and I was summoned to Allentown, Pa., Mr. Samuel Weatherall, secretary of the company was made a colonel. I consulted him and he advised me to form a company of our men at the mines, and if called we could go together. In April 1863 I was called to Allentown to be mustered in. I telegraphed and wrote to New York and for three days got no orders, therefore I took six ore teams and conveyed sixty-eight of our men to Allentown, Pa.

I passed the physical exami-

I passed the physical examination alright, but when I appeared before the recruiting officer to be sworn, I was refused and no reason given me for it. The company composed of our men all felt wrathy because I was not going and tried to back out, but their names had already been taken

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In the January 24, 1833 issue of *Northern Pennsylvanian*, p. 3, is a very interesting ad for coal on sale in Carbondale. From that ad, we learn that

- James Stott has a lease on the coal mine on Falls Road, generally known as Treat's mine, but is "most unjustly and ungenerously kept from his right"
- Having been kept from his right, Stott has opened the same vein of coal about twelve rods near to the village of Carbondale, and can now serve "Eastern and Western customers with Coal out of the very same Coal mine that Mr. Treat serves them" at reduced prices
- Stott will receive all kinds of agricultural produce in payment for his coal
- Stott has made "a good, a new, and a near road to the Coal Bed"
- To purchase coal from Stott, customers may "apply to Mr. Bacon at his store, corner of Market and Dundaff streets, or to James Stott."

#### Here is that ad:

"COAL / On Sale, at Carbondale. / The subscriber, who has a lease of the Coal mine on Falls Brook generally known as Treat's mine, being most unjustly and ungenerously kept from his right, has opened the same vein of Coal about twelve rods nearer to Carbondale village, and can now serve the Eastern and Western customers with Coal out of the very same Coal mine that Mr. Treat serves them, at the following reduced prices: All kinds of agricultural produce will be taken in payment at a fair market price:--he has made a good, a new, and a near road to the Coal Bed. Apply to Mr. Bacon at his store, corner of Market and Dundaff streets, or to James Stott. /

#### Price per Ton of 2240 lbs.

 Large Coal
 Broken Coal

 At Carbondale
 \$1 37 1/2
 \$1 12 1/2

 At the Coal Bed
 87 1/2
 62 1/2

Carbondale, Jan. 24, 1833.--3t."

(Northern Pennsylvanian, Thursday, January 24, 1833, p. 3)

In that same issue of *Northern Pennsylvanian* (Thursday, January 24, 1833, p. 3), James D. Treat placed an ad, offering for sale, among many other items, "the first Quality of / **Stone Coal**, / by and quantity, at his mine, or delivered in the village."

Here is Treat's ad:

"For Sale. / The Subscriber has and offers for Sale, the first Quality of / Stone Coal, / by and quantity, at his mine, or delivered in the village.

Also, a quantity of POWDER; by the keg; PORK, FLOUR, and WHISKEY, by the barrel; Buckwheat and Indian Meal, Butter, Cheese, etc. etc.

All, or any of which, will be sold cheap, for cash, or barter.

#### Jas. D. Treat.

Carbondale, January 21, 1833"

(Northern Pennsylvanian, Thursday, January 24, 1833, p. 3)

In the September 12, 1833 issue of *Northern Pennsylvanian*, p. 4, James Stott offered coal for sale to the inhabitants of Carbondale both at his new mine, THE PRIDE OF CARBONDALE, or from his Fall Brook mine "(called Treat's)". Here is that ad:

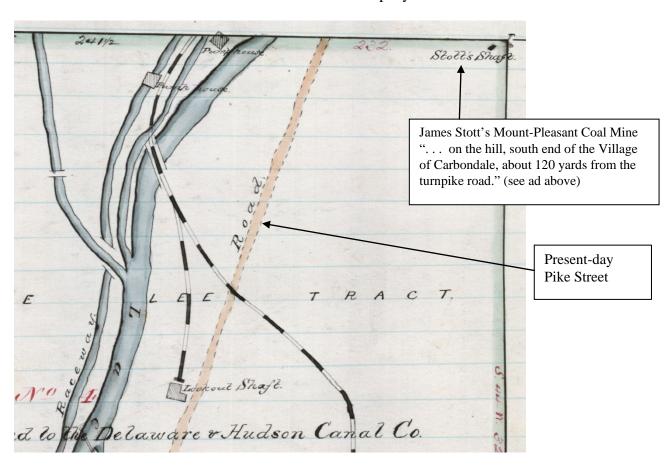
"Coal Afloat. / The inhabitants of Carbondale, are informed, that the subscriber will serve them with Coal, of the very first rate quality--either from his new Mine, THE PRIDE OF CARBONDALE, or from the Fall Brook (called Treat's)--price, delivered, \$1,25cts. per Ton of 2240 lbs. / James Stott. / Carbondale, Aug. 29, 1833—tf"

In *Northern Pennsylvanian*, Saturday, December 27, 1834, p. 3, James Stott announced that he opened his Mount-Pleasant Coal Mine "on the hill, south end of the Village of Carbondale, about 120 yards from the turnpike road." The coal from that mine, said Stott in his ad, "is found to contain as much carbon, and to be in every way equal to the best sent to market by the Delaware & Hudson Canal company, which has been analyzed by professors in chemistry, and pronounced by them to be / FIRST RATE COAL." In addition, said Stott in his ad, "The Subscriber will sell as cheap as his neighbours, and is willing to take butter, cheese, beef, pork, corn, oats, barley, rye, potatoes, or dried apples, in trade for coal, at the market price in Carbondale." Here is that ad:

"COAL. / The Subscriber informs Teamsters, and the Public generally that he has opened his / Mount-Pleasant Coal Mine, on the hill, south end of the Village of Carbondale, about 120 yards from the turnpike road. Geologists agree in asserting that the deeper coal lies in the earth, the stronger, purer and more durable it is. The Mount Pleasant coal pit is from 25 to 30 yards deep, and the mine is found to contain as much carbon, and to be in every way equal to the best sent to market by the Delaware & Hudson Canal company, which has been analyzed by professors in chemistry, and pronounced by them to be / FIRST RATE COAL. Mechanics

generally, who have tried it, approve of it either for house fires, blacksmiths, or foundries. The Subscriber will sell as cheap as his neighbours, and is willing to take butter, cheese, beef, pork, corn, oats, barley, rye, potatoes, or dried apples, in trade for coal, at the market price in Carbondale.--Such teamsters as choose to go up to the coal pit to load, and for choice of coal, will have a handsome allowance made for drawing it down to the village. **James Stott.** / Carbondale, December 27, 1834" (ad also published in *Northern Pennsylvanian*, January 2, 1835, p. 4)

"Stott's Shaft" (Mount-Pleasant Coal Mine) is shown on the map below from *D&H Deeds Luzerne I*, p. 14. This is a detail of a map that illustrates a deed, dated November 1, 1825, pp. 15-16, between John Wurts and The Delaware & Hudson Canal Company:



James Stott, who married Hannah Crossley, came to Carbondale in 1828. They had nine children. In the obituary of one of those children, also names James (obituary in one of the Gritman scrapbooks and dated January 23, 1904) we read the following about James Stott the father/the coal miner: "In 1828 the elder Mr. Stott came to Carbondale to engage in the coal business, then in its infancy. Carbondale at that time was but a mere hamlet. He opened what was known as Stott's shaft, on Welsh hill, near the present location of No. 3 school house. While a portion of the product was sent to other points most of the coal from Stott' shaft was disposed of in this vicinity. . ."

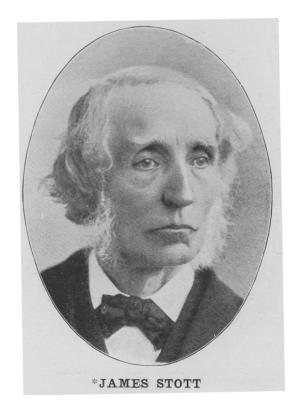
James Stott, the son of James and Hannah Crossley, who was born in the parish of Worsly, England, on November 30, 1817 and died in Carbondale on January 23, 1904, was one of the leading citizens of Carbondale throughout the second half of the nineteenth century.

In 1856 he became the cashier of Carbondale's first banking house, that of Gillespie, Pierce & Co. The stockholders of that institution were Thomas Gillespie, Horatio S. Pierce, and James Stott. In 1864, the First National Bank was organized and absorbed that private banking business. James Stott became cashier of the new institution and retained the position until 1897 when he retired.

The following biographical portrait of James Stott, the son, is given in Dwight J. Stoddard's *Prominent Men*, 1906, p. xii:

"James Stott / Born Worsly, England, Nov. 30, 1817--Jan. 23, 1904. Educated Phila. and Germantown. Married Mary J. Fordham (Widow of Charles Baker), 1871. Cashier and Vice President First Nat. Bank. 1856 became Cashier of Carbondale's first Banking House of Gillespie, Pierce & Co. 1864 he became Cashier of the First National Bank. Retired in 1897 from Cashier and was then elected Vice President."

On page 46 in *Stoddard*, we find the following photograph of James Stott:



When, in the twenty-first century, the First National Bank of Carbondale was acquired by/merged with NBT Bank, the Carbondale Historical Society expressed a strong interest in becoming the guardians of the portraits of the First National Bank officers and directors in the collection of the First National Bank. In May 2016, First National Bank president John Wideman, and Mayor Justin Taylor of Carbondale (the new owner of the bank building) gave the First National Bank portraits to the Carbondale Historical Society. In December 2016 those portraits were photographed by Doug Goodrich.

Given on the following three pages are photographic copies, produced by Doug Goodrich, of the portraits of the three original directors of the First National Bank of Carbondale, Thomas Gillespie, Horatio S. Pierce, and James Stott. These portraits, together with many other portraits of the bank's officers and directors over the years, are now in the holdings of the Carbondale Historical Society and Museum:

## Thomas Gillespie



Thomas Gillespie, 1804-1867

Horatio S. Pierce



Horatio S. Pierce, 1817-1889

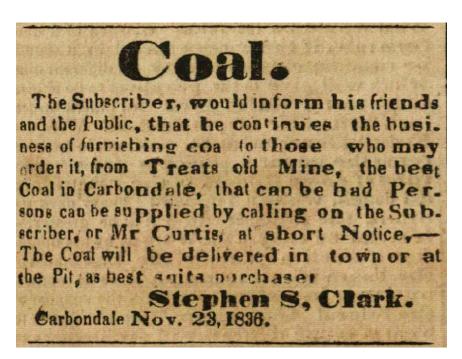
### James Stott



James Stott, 1817-1904

To return to our look at independent coal mine operations in Carbondale in the nineteenth century:

In November 1836, "Treats old Mine" was under the control of Stephen S. Clark. Customers who wanted coal from that mine, we learn from an ad that was placed in *Northern Pennsylvanian*, November 26, 1836, p. 3, should contact Stephen S. Clark or Mr. Curtis. Here is Clark's ad:



From an ad in that same issue of *Northern Pennsylvanian*, we also learn that Mr. Curtis, at his store in Carbondale, also sold coal from Stott's Mine. Here is the ad from M. Curtis:



These independent coal dealers in Carbondale in 1840 (Stott, Meredith, and many others) sold about three thousand tons of coal annually in the village of Carbondale and in the surrounding country. In the article titled "Lackawanna Valley—No. VII" that was written for and published in the *Carbondale Journal* (Thursday evening, June 18, 1840, p. 2), we read:

"In addition to the coal sent to market by the Company [D&H] upon their works, there is a domestic coal trade to the amount, probably, of three thousand tons annually. This is for the supply of the village and surrounding country; indeed some of it is carried far into the State of New York, and may be found in the Smith's shops and Foundries at a distance of a hundred miles; hauled from the Carbondale mines upon sleighs. This coal comes chiefly from the mines of Mr. Warder, of Philadelphia, called the 'Fall Brook Coal bed . . and the coal bed of Mr. Stott, called Mt. Pleasant. / Thomas Meredith Esq. . . also entered the list of competitors for the domestic coal trade last winter, and sold, we believe, some four or five hundred tons. Mr. Meredith's coal is chiefly distinguished for its peculiar fitness for Smith's work and Foundry uses. . ."

Thomas Meredith, one such coal dealer in Carbondale at the time, was not only a coal miner but also a community leader. On January 21, 1840, was elected president of the Lackawanna and Susquehanna Rail Road Company. Here is the announcement about his election as president of that railroad that was published in the January 23, 1840 issue of *The Carbondale Journal* on page 3:

At an election for officers of the Lackawanna and Susquehanna Rail Road Co., held at the Rail Way Hotel, in the village of Carbondale on the 21st inst. The following persons were elected to serve for one year, namely:

"Thomas Merideth, President. . ."

THOMAS MERIDETH, President.

SAMUEL HODGDON, Treasurer.

LEWIS JONES, Jr. Secretary.

# Managers:

Samuel Hodgdon,
F. M. Crane,
Geo. W. Woodward,
V. L. Maxwell,
John Graham,
William Dymock,
S. Meylert,
John Mumford,
William Hartley,
Lewis Jones, Jr,
LEWIS JONES, Jr. Secty.
Carbondale, Jan. 23, 2840.

The Carbondale Journal, January 23, 1840, p. 3

In 1840, Thomas Meredith continued to sell at his mine, two miles below Carbondale, "coal of an excellent quality, for one dollar a ton." Here is a space ad that he placed in *The Carbondale Journal* in January 1840, and in the February 13, 1840 issue of that same paper on page 3:

"... This coal is remarkably free from sulpher and slate, and has been found not only well adapted for stoves and grates, but for Smiths, Axe Makers &c."

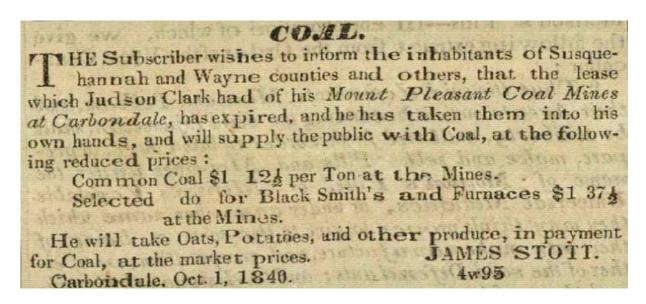
### TO THE PUBLIC

THE subscriber offers for sale, at his Mine, two miles below Carbondale, Coal of an excellent quality, for one dollar a ton. This coal is remarkably free from sulpher and slate, and has been found not only well adapted for stoves and grates, but for Smiths, Axe Makers, &c. A constant supply will be kept on hand:

Carbondale, January 1, 1840: 9w56

In the 1830s, Dundaff was the market center for the upper Lackawanna Valley and, as we have shown above, entrepreneurs like Thomas Meredith marketed their Lackawanna Valley coal not only in the Lackawanna Valley but also at Dundaff. By 1840, the market center for the upper Lackawanna Valley was clearly Carbondale, and the market for coal in Carbondale was sufficiently strong that mine owners like Thomas Meredith no longer found it necessary to use out-of-town vendors for their coal. By 1840, if you needed coal, you came to the Lackawanna Valley for it or you paid someone to transport the coal to you.

By means of a notice that was published in *The Carbondale Journal of* November 19, 1840, p. 3 (and again in the *Carbondale Journal*, February 11, 1841, p. 4) James Stott informed the inhabitants of Susquehanna and Wayne Counties, and others "that the lease with Judson Cark had expired on his *Mount Pleasant Coal Mines at Carbondale*" and that he, James Stott, was again in charge of the Mount Pleasant Coal Mines and that he would supply the public with coal. In payment for that coal he will take oats, potatoes, and other produce, at market prices. Here is that ad from James Stott:



The Carbondale Journal of November 19, 1840, p. 3

A wide array of options were open to persons, both from the country and from the village of Carbondale, who were interested in purchasing coal from Gardner and Clark in 1840-1841. Common coal, selected coal for black smiths and furnaces, and Fall Brook coal, "well known to be superior to any other coal produced in this market," were all available. Here is the Gardner and Clark ad that was published in the *Carbondale Journal* in the late fall/early winter of 1840-1841:

"COAL. / The subscribers hereby give notice, that they will furnish Teams from the country with coal, at the following prices: common Coal at \$1 12 1/2 per ton at the platform or mines; selected Coal for Black Smith's and Furnaces, \$1 37 1/2 per ton at the platform or mines. They will also furnish the FALL BROOK COAL, well known to be superior to any other produced in this market, at \$1 25 per ton for the common coal at the mines, and \$1 50 per ton for the coarse coal at the mines. They will deliver the Fall Brook Coal in the village for \$1 50 per ton for the common, and \$1 75 per ton for the coarse coal. / Cash paid for WHEAT at our mill, 12 miles below Carbondale. / GARDNER & CLARK. / Carbondale, Oct. 22, 1840. "(Carbondale Journal, January 7, 1841, p. 4)

Ten years later, in 1850-1851, Judson Clark, who may well be the Clark of Gardner and Clark in the ad given immediately above, offered for sale, at his store on Dundaff Street in Carbondale near the Lackawanna Bridge, fresh ground flour and coal of different sizes and quality. Here is his ad from the *Carbondale Transcript, and Lackawanna Journal* of March 14, 1851, p. 3:

### COAL! COAL! COAL!

Store on Dundaff street, near the Lackawanna Bridge. Fall Brook Coal of different sizes and quality; prices varying from \$1 25 to \$1 50 per ton, delivered within the village. Also, Fresh Ground Flour, constantly on hand and for sale at the market price. Nov. 4, '50.

In 1856, the Carbondale Coal Company purchased 400 acres of coal lands immediately south of Carbondale and, it was announced in the *Carbondale Transcript & Lackawanna Journal* of February 8, 1856, p. 2, were making preparations to mine 100,000 of coal per year. These coal lands, located nearly opposite the residence of Samuel R. Meredith, were formerly the Morgan and the Depew farms. This was the first private enterprise of its kind, said the Carbondale papers, with an impressive group of community leaders as officers and directors: Orrin Whitmore, President; Thomas Gillespie, Treasurer; Lewis Jones, Secretary; Managers, D. N. Lathrop, H. S. Pierce, Orrin Whitmore, John S. Law, and Charles B. Campbell). Here is the announcement from the February 8, 1856 issue of the *Carbondale Transcript & Lackawanna Journal:* 

"Carbondale Coal Company. / This Company recently formed under the general mining law, has purchased some 400 acres of Coal lands immediately below this city—all in one body,--and will we understand sink a shaft immediately and prepare for a business of 100,000 tons per year. The lands belonging to the Company are known as the north half of the tract in the warrantee name of 'James Rider,' the farms known as the 'Morgan' and 'Depew' Farms. The works of the Company will be nearly opposite the residence of Sam'l R. Meredith, Esq., and we are assured will be prosecuted with all vigor. The coal will be sent east from here, whether by the Delaware & Hudson railroad, or by the new Lackawanna & Lanesboro road—the charter for which has just been obtained, we are unable to say. We hail this, the first private enterprise of this kind in our vicinity, with a hearty welcome, as an earnest of others soon to follow. / The officers are Orrin Whitmore, President; Thomas Gillespie, Treasurer; Lewis Jones, Secretary. Managers, D. N. Lathrop, H. S. Pierce, Orrin Whitmore, John S. Law, and Charles B. Campbell. Incidentally, we hear of other enterprises, not yet fully matured, to be commenced below this in the valley."(Carbondale Transcript & Lackawanna Journal, February 8, 1856, p. 2)

In the *Carbondale Transcript & Lackawanna Journal*, published a week later, it was announced that the Carbondale Coal Company had struck a vein of superior coal (bright and free from slate) 9 feet 2 inches in thickness, at a distance of 40 feet below the surface. The company will continue boring into the lower strata, as it is known that there are two other veins pervading the basin. The works of the Company are located on the former Depew farm, a short distance east of the president of the President, Orrin Whitmore, Esq. Here is the announcement that was published in the April 18, 1856 issue of the *Carbondale Transcript & Lackawanna Journal*:

"We mentioned last week that the Carbondale Coal Company had commenced boring for coal on their lands below town. We now have the gratification to announce that they have met with complete success,--having struck a vein of 9 feet 2 inches in thickness, at a distance of about 40 feet below the surface. The coal is of a superior quality, bright, and free from slate. The borings will be continued till they penetrate the lower strata, as there are two other veins pervading the basin. The Works of the Company will be on the Depew Farm, a short distance east of the residence of the President, Orrin Whitmore, Esq." (Carbondale Transcript & Lackawanna Journal, April 18, 1856, p. 2)

In 1858, arrangements were made by two private coal mining operations in the upper Lackawanna Valley to deliver to/sell to "the Company," that is to say, the Delaware and Hudson Canal Company, coal from their privately held mines. The owners of those two private coal mining operations were:

- 1. Captain William Brennan: several hundred acres of coal lands on the Frederick Riphold tract, south of the old Milford & Owego turnpike, and about 2 miles northwest from Carbondale;
- 2. Rev. A. Barker, Lewis Pughe, Esq., and one or two others from Carbondale, and Edward Jones of Archbald: coal lands on the Hull, Mott and other tracts in Blakely

Here is the announcement about these private/D&H arrangements that was published in the *Carbondale Advance* of June 26, 1858:

"ENCOURAGING / We are pleased to learn that Capt. Wm. Brennan, of our city, has consummated an arrangement with the Company to deliver them Coal from his lands above the City.—The opening will be upon the Frederick Riphold tract, south of the old Milford & Owego turnpike, and about 2 miles N. W. from town. / Capt. Brennan has several hundred acres which from several borings made give evidence of being among the best coal lands in the valley. The relative veins appear to be thicker and a least as good as those worked here. He proposes to commence preparatory operations next week. / Rev. A. Barker, Lewis Pughe, Esq., and one or

two others of this City, and Edward Jones of Archbald, have also concluded an agreement with the Company to deliver them coal from the 'Hull,' 'Mott,' and other tracts in Blakely, which promises well." (Carbondale Advance, June 26, 1858, p. 3)

In November 1860, Captain Brennan was able to deliver about 100 tons of coal per day from his mines just above Carbondale. In the *Carbondale Advance* of November 10, 1860, we read:

"The Coal Business is progressing prosperously, still as the days become shorter a full days work upon the road is made with more difficulty and the aggregate shipped during the week hence becomes a little less. / The Mines and works of Capt. Brennan just above town, now in successful operation, are worthy of and will soon receive more particular notice than we have yet given them. The Captain's coal is among the best in the valley. He is now delivering about 100 tons per day and will soon increase considerably." (*Carbondale Advance*, November 10, 1860, p. 2)

In February 1875, Messrs. Loftus and Brennan were sending considerable quantities of coal to Susquehanna Depot and to Binghamton from their mines just above Carbondale. In the *Carbondale Advance* of February 6, 1875, we read:

"Messrs. Loftus and Brennan of this City are sending coal in considerable quantities to Susquehanna Depot and Binghamton, from their respective mines in this city." (*Carbondale Advance*, February 6, 1875, p. 3)

We have learned more about the village of Brennan's Mines and about Captain William Brennan's coal mines "above the City [of Carbondale] . . . south of the old Milford & Owego turnpike" from a letter, dated "Carbondale, Sept. 30, 1861," that Phillips Wilson wrote to his son, Robert B. Wilson, in San Francisco, CA (original letter in the collection of the Carbondale Historical Society).

Here is a facsimile of a portion of that letter:

the fusent Summer - a village called "hammons Minis" three miles up the mountain containing about 100 houses has been built within a year, Eapt. Bruman owns the mines, but Bacher & Eo. Rent the mines & machinery & deliver about 300 tons a day. Sweal individual operators are also mining & delivering Eoal in this vicinity. & as there is much competition in the trade, we get a putty good article without servening at a dollar a ton. Many enquires are made about you, such as

"... There has been but few improvements made in our City during the present summer [1861]—a village called 'Brennans Mines' three miles up the mountain containing about 100 houses has been built within a year, Capt. Brennan owns the mines, but Barker & Co. rent the mines & machinery & deliver about 300 tons a day. Several individual operators are also mining & delivering coal in this vicinity, & as there is much competition in the trade, we get a pretty good article without screening at a dollar a ton..."

In *Portrait and Biographical Record of Lackawanna County, Pennsylvania*, 1897, there is a portrait of Henry J. Brennan (pp. 449-450), with a portrait of the man on p. 448. We learn from it that Henry J. Brennan was born in Carbondale, November 1, 1850, a son of Thomas and Eliza (Brennan) Brennan.\* We read: "In 1838, when about twenty-two years of age, Thomas Brennan came to America and settled in Carbondale, where he engaged to work in the coal mines. In 1847 occurred the greatest mine disaster the United States had ever experienced, and while the majority of the miners lost their lives, he and a few others were released, after three days' confinement, more dead than alive, having suffered untold misery."

\*They had 15 children. Henry J. was the oldest. Eliza Brennan and Thomas Brennan were from two different Brennan families. Her father was the youngest child of Lawrence Brennan.

In preparing this biographical portrait of Henry J. Brennan, somebody got their facts wrong. "The greatest mine disaster the United States had ever experienced" took place in 1846, not 1847. In addition, there is no mention in the published accounts of the 1846 disaster of a Thomas Brennan. Two members of the Brennan family were killed in the 1846 disaster: John and Mark.

This same Thomas Brennan, who came to America in 1838 was elected mayor of Carbondale in 1879.

Henry J. Brennan's mother, Eliza (Brennan) Brennan, we learn from the portrait of her son, Henry J. Brennan, was a sister of Captain William Brennan, who was the oldest son of Lawrence Brennan.

Captain William Brennan is an interesting fellow. In the biography of Henry J. Brennan, the son of his sister Eliza, we read:

"Capt. William Brennan . . . was a man of business ability, a civil engineer by profession, but for some time engaged in mercantile enterprises. He was a pioneer in the settlement of Carbondale. In those days it was thought that there was no coal in the mountains between Carbondale and Forest City, but he was of a different opinion, and endeavored to convince the managers of the Delaware & Hudson Railroad that there were coal veins. They, however, would have no part in

what they termed his wild cat scheme of prospecting for it. Thoroughly convinced that he was correct, he started out to make the experiment on his own account and secured possession of a large tract of land. The result proved the wisdom of his opinion. Coal was found in large quantities. He raised a large sum of money, opened up a mine and operated it for some time with a large force of men. When it was finally settled that there was coal in immense quantities, the Delaware & Hudson were anxious to acquire possession of his property, and while he was not desirous of selling, yet he did so on receipt of a large price that was a fortune in itself. He then retired from the coal business and engaged in stock operations in Wall Street, where he met with some heavy losses. His stately residence in Upper Salem Avenue, Carbondale, is now a part of St. Rose Catholic parochial school. Having a wide acquaintance in Ireland, the people from that country on emigrating to the United States headed for Carbondale, where they were sure to find a friend in him. Through his assistance many found profitable employment." (pp. 449-50)

On September 24, 1862, Michael Burke, while a work mining in the employ of E. Jones & Co., Olyphant, was killed by the falling of the roof. He was survived by a widow and seven children, one of whom was serving in the Union army at the time. Here is the newspaper notice of this accident in a privately held mine in Olyphant in September 1862:

"Michael Burke, in the employ of E. Jones & Co., Olyphant, while at work mining on Wednesday morning last, was killed by the falling of the roof. He died from the injuries received before his comrades removed him out of the mines. Mr. Burke is known to many of our old citizens; he worked several years here [Carbondale] until about three years ago, when he removed to Olyphant. He leaves a widow and seven children; one of his sons is now in the Union army." (*Carbondale Advance*, September 27, 1862, p.3)

In 1864-1865, S. S. Clark, whose office was on Dundaff Street in Carbondale, near the Lackawanna Bridge, announced in the *Carbondale Advance* that he was prepared to deliver on short notice chestnut, slide, egg, and lump coal to customers. Here is his ad from the February 20, 1864 issue of that paper:

### "COAL! COAL!

The Subscriber is now prepared to deliver, on short notice, the

### **BEST QUALITY**

of Coal, at the following prices:--

**Chestnut,** \$1,75

**Slide,** 1,75

Egg and Lump, 2,00

All orders left at my office, near the Lackawanna Bridge, on Dundaff Street, will be promptly attended to:

#### S. S. CLARK

Carbondale, Feb. 20, 1864"

(Carbondale Advance, February 20, 1864, p. 3)

In the fall of 1864 and into the spring of 1865, S. S. Clark announced that he was then prepared to supply broken and screened coal, of all marketable sizes, at better prices than anywhere else available in Carbondale. His coal was available at his mines or he would deliver it to customers in town. Here is his ad from the March 11, 1865 issue of the *Carbondale Advance*:

# SCREENED COAL!

# THE Subscriber is now prepared to supply Coal of an excellent quality

### Broken and Screened.

and prepared of all the marketable sizes, at less price for each size than Coal of the same quality can be bought elsewhere, either at the Mines, or delivered to customers in town.

All orders promptly attended to.

S. S. CLARK.

Carbendale, Oct. 4, 1864.-n20.

(Carbondale Advance, March 11, 1865, p. 1)

In January 1873, Hendrick & Thomas announced in the Carbondale Advance that

- their new coal breaker was finished
- they were prepared to deliver all sizes of coal (grate, egg, stove, chestnut and pea)
- their office for receiving orders was with J. M. Poor, 318 North Main Street, Carbondale

Here is their ad from the January 11, 1873 issue, p. 2, of the *Carbondale Advance*:

# PREPARED COAL!

### HENDRICK & THOMAS,

Hendrick & Thomas breaker finished in 1873

S.S. DERNEGIOT. EST. 1725/17D 1343. NEW DEEC

Having finished their new Coal Breaker, are now ready to supply the little

# WELL PREPARED COAL OF ALL SIZES,

At the following prices, delivered:

# CRATE, ECC AND STOVE, \$2.75, CHESTNUT, \$2.50, PEA, \$1.75

PLEASE GIVE OUR COAL A TRIAL.

Office for Receiving Orders with J. M. Poor,

NO. 318 NORTH MAIN STREET, CARBONDALE.

Junuary 11, 1873

Carbondale Advance, January 11, 1873, p. 2:

In the October 4, 1873 issue of the Carbondale Leader, p. 3, Michael Loftus announced that

- he is now mining and furnishing and excellent quality of "pure coal" coal from the old Clark mines
- he will deliver coal, broken and screened and of any size, to customers at the lowest market rates
- orders for his coal could be left at the office of John Stuart, at the stores of John Watt & Sons and Pascoe & Scurry, and at Patrick Hart's on Shanty Hill

Here is that ad from Michael Loftus:

# PURE COAL.

The subscriber is now mining and furnishing an excellent quality of COAL from the old Clark mines, which will be delivered promptly, and at the LOWEST MARKET RATES. The coal will be well broken and screened, and any desired size furnished. Orders may be left at the office of John Stuart, at the stores of John Watt & Sons and Pascoe & Scurry, and at Patrick Hart's, on Shanty Hill.

MICHAEL LOFTUS.

Carbondale, October 4, 1873.

Carbondale Leader, October 4, 1873, p. 3 (above ad also in Carbondale Leader, February 28, 1874, p. 4)

From an article that was published in the February 6, 1875 issue of the *Carbondale Advance*, we learn that Messrs. Loftus and Brennan were sending coal in considerable quantities from their respective mines to Susquehanna Depot and Binghamton. Here is that article:

"Messrs. Loftus and Brennan of this City are sending coal in considerable quantities to Susquehanna Depot and Binghamton, from their respective mines in this city." (*Carbondale Advance*, February 6, 1875, p. 3)

In the period 1876-1879, and possibly after that, Jones, Powell & Voyle, the Welsh Coal Company, announced in the *Carbondale Advance* that they were prepared to deliver lump, egg, stove, and chestnut coal, on short notice, to any part of the city of Carbondale from their mines near Yarrington's Mill. From farmers, they were prepared to take produce in exchange for coal "on account of hard times." Orders for their coal could be left at their mines or at Voyle's Store on Seventh Street, corner of Main. Here is their ad:

"WELSH COAL COMP'Y. / MINES NEAR YARRINGTON'S MILL. / OUR NEW COAL BREAKER is now ready and we are prepared to deliver all sizes of coal—LUMP, / EGG, /

STOVE, / CHESTNUT, / on short notice in any part of the city. The new opening of coal now mined is superior to coal formerly mined and will compare with any coal in the valley as to quality. / To Farmers in want of coal: We are prepared to take produce in exchange for coal, on account of hard times. / All orders left at the Mines or at Voyle's Store, on 7th street, corner of Main. / JONES, POWELL & VOYLE. / Carbondale, Nov. 11, 1876." (*Carbondale Advance*, June 16, 1877, p. 1) This same ad was published in the *Carbondale Advance* of March 1, 1879, p.1.

Two twentieth-century miners' pay stubs:

In the Marianne Stratford Collection at the Carbondale Historical Society, there is a pay stub for "Herbert Vaverchak Miner", for the first half of July 1949, from the Yanchik Mining Company. To date, we have not learned any additional information about this mining company. Here is the pay stub in question (3 hours a day for five days = \$65, minus \$5.30 deductions (social security, Carbondale City, union) = \$59.70. Here is that pay stub:

Hubert Townshik Minum

Thud from

Yourchel Mening Co

Boowing 1st Half July 1949

5 days

5 days

25.00

Adustions

CS

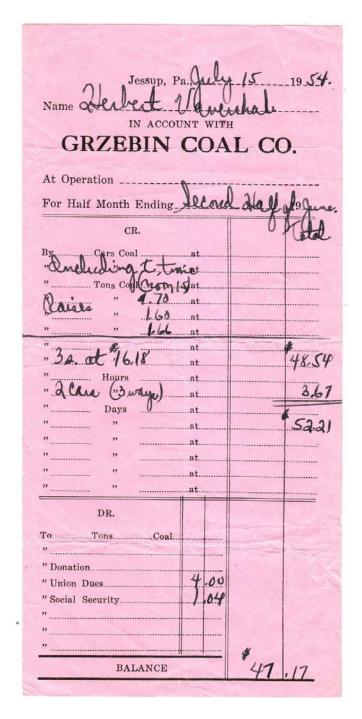
Call City

Union

530

59.70

Also in the Marianne Stratford Collection at the Carbondale Historical Society is a Herbert Vaverchak pay stub, dated July 15, 1954, for the second half of June 1954, from the Grzebin Coal Company, Jessup, Pa. To date, we have not learned any additional information about the Grzebin Coal Co.



### **D&H Coal Operations**, 1820s-1900

Only a small quantity of coal was shipped through the D&H Canal in 1829, the shipping season lasting only from October 9, 1829 until freezing weather (December 1829) caused canal shipments to come to an end. Some of the coal that was shipped to market in that period was of poor quality, which caused many potential buyers of coal to question the quality of the D&H product. For that reason, only 43,000 tons were sold during 1830.

In November 1830, heavy rains filled the coal mines at Carbondale with water, which brought mining to a halt. On Monday the 15<sup>th</sup> of November, 1830, Samuel Sloane, a laborer in the mines, was missing. Three days later, his body was found in one of the pits. The following account of his death was published in the *Dundaff Republican*, and Canal & Rail Road Intelligencer, November 24, 1830, p. 2:

"DROWNED. In consequence of the heavy rains last week the coal mines at Carbondale were filled with water. On Monday evening the 15<sup>th</sup> inst. *Samuel Sloane*, a laborer was missing; search was diligently made until Thursday afternoon, when the body was found in one of the pits. It is supposed that he fell from the bank while in a state of intoxication." (*Dundaff Republican, and Canal & Rail Road Intelligencer*, November 24, 1830, p. 2)

In 1831, the Directors of the D&H concluded that it would be in the best interest of the Company if the Company encouraged individual enterprise. Accordingly, the Directors resolved "That the Toll on Coal upon the Rail Road, be reduced to 50 cents per ton, subject to all the regulations and provisions, adopted with the Tariff, on the 8th of September, 1830. / And that the total amount of toll on Coal transported on the Canal shall not exceed \$1,50 per ton." In the *Dundaff Republican, and Canal & Rail Road Intelligencer* of April 6, 1831, we read:

"DELAWARE & Hudson Canal Company, January 26, 1831. /The Board being persuaded that the true and permanent interest of the Company will be best promoted by encouraging individual enterprise, it is therefore:-- / RESOLVED, That the Toll on Coal upon the Rail Road, be reduced to 50 cents per ton, subject to all the regulations and provisions, adopted with the Tariff, on the 8th of September, 1830. / And that the total amount of toll on Coal transported on the Canal shall not exceed \$1,50 per ton. / Extract from the minutes/ S. FLEWELLING, Treasurer, Honesdale, Feb. 16, 1831," (Dundaff Republican, and Canal & Rail Road Intelligencer, April 6, 1831, p. 4)

In December 1832, "Lackawanna Coal" (D&H coal) was used with perfect success in open sea navigation on the steamboat David Brown between New York and Charleston, SC. Lackawanna coal, it was noted in an article in *The New York Journal of Commerce*, had "greater combustibility and flame than other anthracites." About this use of D&H coal on the steamboat *David Brown*, we read the following in the *Northern Pennsylvanian* of December 7, 1832:

"The New York Journal of Commerce states that 'The Steamboat David Brown has made the experiment of open sea navigation between New York and Charleston with perfect success. The fuel used was the Lackawanna Coal which from its greater combustibility and flame than other anthracites, has been brought to operate for generating steam.' "(Northern Pennsylvanian, Friday, December 7, 1832, p. 3)

#### Note on coal names:

Delaware and Hudson Canal Co. coal was known as, and marketed as, "Lackawanna Coal"; Pennsylvania Coal Company coal was known as, and marketed as, "Pittston Coal"; Delaware, Lackawanna and Western Railroad Company coal was known as, and marketed as, "Scranton Coal".

On Monday, January 7, 1833, at 8 A. M., a keg of powder caught fire and exploded in the D&H mines at Carbondale, which resulted in the death of two young Welshmen, Daniel Guynn, age 19, and Samuel Davis, age 27. In the *Northern Pennsylvanian* of Thursday, January 10, 1833, we read:

"Melancholy Accident. / On Monday morning last, about 8 o'clock, by some accident, fire was communicated to a keg of powder in or about the coal mines, in this village, and which exploded and so severely wounded a Mr. Daniel Guynn, a Welch miner, that he only survived about two hours, and severely injured another, named Samuel Davis, who expired about twelve or fourteen hours after the explosion." (*Northern Pennsylvanian*, Thursday, January 10, 1833, p. 3)

The story of the accident in which Davis and Guynn were killed was picked up by the *Gettysburg Complier* and on page one of the Tuesday, February 5, 1833 issue of that paper is the following article:

# CARBONDALE, (Pa.) Jan. 10.

Melancholy Accident.—On Monday morning last, about 8 o'clock. by some accident, fire was communicated to a keg of powder in, or about the coal mines, in this village, and which exploded, and so severely wounded a Mr. Daniel Guynn, a Welsh miner, that he only survived about two hours, and severely injured another, named Samuel Davis, who expired about twelve or fourteen hours after the explosion.

Our thanks to Jerry Williams, Carbondale, for having located this article about Davis and Guynn in the *Gettysburg Compiler*.

The earthly remains of both Samuel Davis and Daniel Guynn were interred in Maplewood Cemetery, Carbondale, on January 9, 1833. They are the 5<sup>th</sup> and 6<sup>th</sup> persons, respectively, in the Maplewood Cemetery interment records. Therein we read:

"5 Davis Samuel [Age] 27 [Disease] Killed in Mines [Date of Death] Jan 7 1833 [Date of Burial] Jan 9 1833 [Nativity] Welsh"

"6 Guin Daniel [Age] 19 [Disease] Killed in Mines [Date of Death] Jan 7 1833 [Date of Burial] Jan 9 1833 [Nativity] Welsh"

Here is the inscription on the Samuel Davies tombstone in Maplewood Cemetery:

IN Memory of SAMUEL DAVIES,
Native of the Parish of Llanguic, in Wales, who departed this life Jan.y 7<sup>th</sup> 1833 Aged 26 Years.

\_\_\_\_\_

Am hynny byddwch chwithau barod: canys yn yr awr ni thybioch y daw Mab y dyn.
Mat.w XXIV.44

\_\_\_\_\_

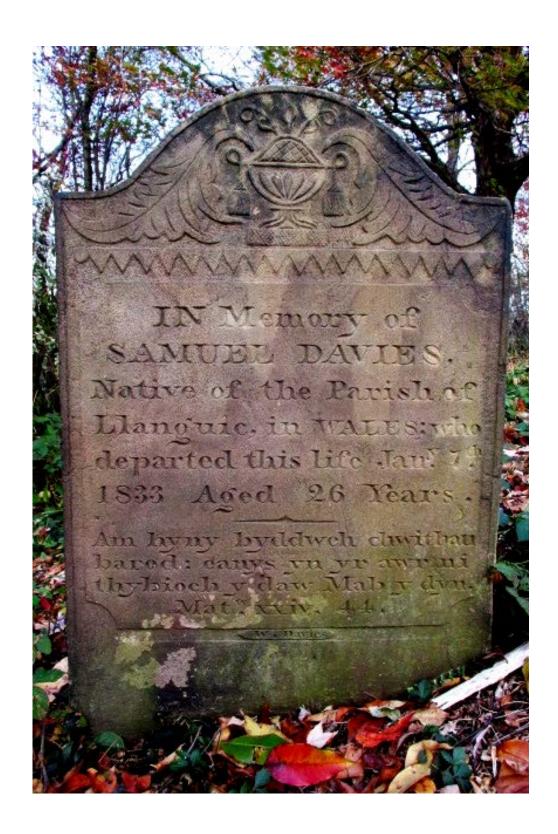
[Matthew 24:44 Therefore be ye also ready: for in such an hour as ye think not the Son of man cometh.]

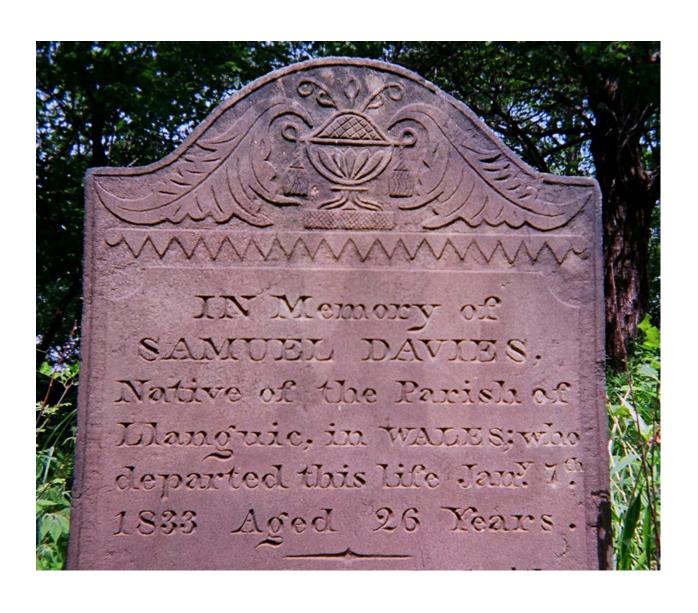
About the parish of Llanguicke, we have learned the following information:

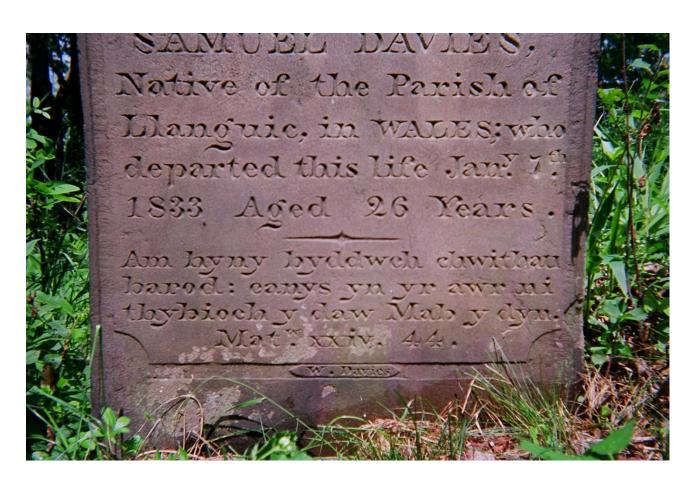
Llanguicke is 10 3/4 miles from Swansea. Llanguicke (also known as Llangiwg) was one of the very ancient parishes into which Glamorgan was divided, on the west bank of the river Tawe, opposite Cilybebyll on the east bank. Llanguicke was a very extensive area which included areas which became better known in later years as Pontardawe, Ystalyfera, Ynysmeudwy etc. Llanguicke is a very extensive and populous parish. Similar to many other places in Wales where the name begins with Llan, Llanguicke is named after a saint, Saint Cuik or Guick. The church of St Cuik, or Guick, standing on the top of a hill, is an ancient building of stone in the Norman style, consisting of nave, south porch and an embattled western tower with pinnacles, containing

2 bells; in 1812 it was new-roofed, and several alterations made; there are 300 sittings. A Welsh service is held on Sundays in the afternoon. The parish is on the Western side of the Swansea valley on the road from Swansea to Brecon, and extends to the boundary of the county of Glamorgan where it adjoins Breconshire and Carmarthenshire. It is in the Western division of the county of Glamorgan. The Swansea Canal runs through some parts of the parish.

Here are four photographs taken by the author of the Samuel Davis tombstone in Maplewood Cemetery:









In an editorial in the January 31, 1833 issue of *Northern Pennsylvanian*, Amzi Wilson, editor, argued against a tax on coal by the Pennsylvania legislature. Here is that editorial:

"Tax on Coal. / Several attempts have been made by some members of the Pennsylvania Legislature, within the last year (and we discover farther symptoms elicited in the present one) to impose a tax on coal. We will not pretend to investigate the correctness of this measure—but barely conjecture that such a course would be destructive to the united, and individual exertion of those engaged in this, at present, hazardous enterprise; and at a time too, when Congress is labouring to effect a reduction on foreign coal, which must eventually embarrass all concerned in this useful employment, it seems almost ridiculous. Is it not enough that the owners of Coal lands should pay extraordinary taxes, levied in consequence of the value of the Coal thereon? Are there not thousands of objects more worthy of taxation, and which would only affect the opulent and idle, than a business which is in its infancy, and frequently terminates ruinous to the capital invested in its prosecution? Would it not be better to tax the numerous offices of profit within the commonwealth, which our citizens are so zealous to obtain, and which would not, as the tax on Coal, tend to reduce the wages of the poor labourer, and thus expose him to penury and want! Would it not be better to impose a further sum on the venders of spirituous liquors, and thereby improve the conditions of those, who, through weakness & easy access have almost become the victims of wretchedness and misery! / We are not seriously disposed to find fault with our Representatives, yet we think they ought to dispense equal justice to all, and enervate every source of industry which may promise advantages to the country at large, and which may eventually become a source of wealth to the state. In a few years Pennsylvania will receive immense advantages from the coal trade, by way of tolls, on her canals.--We think it illiberal to tax coal before the facilities of reaching market are complete, & conceive it her best policy in the first place to complete her internal improvements, and then let the tolls pay the expense. (Northern Pennsylvanian, Thursday, January 31, 1833, p. 2)

In mid-May 1833, a freshet resulted in flooding in the D&H mines in Carbondale. "By the rapid and perpetual motion of the pumps," it was stated in the May 23, 1833 issue of *Northern Pennsylvanian*, it was expected that the water in the mines would be removed and work would again resume in the mines. In the *Northern Pennsylvanian* of May 23, 1833, we read:

"Freshet. / We mentioned last week that a sudden rise of water had occasioned some damages to the works of the Delaware and Hudson canal company. We have not yet ascertained their full extent, but from the improvements going on, a similar occurrence will not probably very soon again occur at this place; and by the rapid and perpetual motion of the pumps, we are led to believe that in a day or two the whole impediment will be removed, and all parts of the mines be in successful operation. . ." (Northern Pennsylvanian, Thursday, May 23, 1833, p. 3)

On Wednesday, August 12, 1835, James Conner, a native of Ireland, age 32, was killed in the mines by the fall of a part of the roof. Here is his obituary, as published in the *Northern Pennsylvanian* of August 15, 1835:

"**Obituary.** DIED--In this village [Carbondale], on Wednesday, the 12<sup>th</sup> day of August, JAMES CONNER, a native of Ireland, in the 32d year of his age. His death was occasioned by the fall of a part of the roof, while engaged in the mines." (*Northern Pennsylvanian*, August 15, 1835, p. 3)

In the winter of 1837, it was necessary for the D&H to reduce the salary of the miners in its employ. We have not yet learned the exact amount of the reduction. Whatever it was, "Brutus" stepped forward and, via two issues of the *Northern Pennsylvanian*, hurled the following two-art invective against the D&H in general, and in particular the New York managers of the corporation:

Part I: "For the Northern Pennsylvanian. / To my Fellow Miners. / Why is it, that we, who have been induced to leave our native country under the promise of constant employment, are obliged, like birds of passage, to fly from place to place and spend, in shifting, the fruits of our vigorous toil. Why is it, that at the approach of winter and exorbitant prices of the necessaries of life, our wages are reduced; which before, would scarcely yield a comfortable support. The reason fellow countrymen, is at hand. We are brought here and made dependant on the will of a heartless monopolizing company for our labor, and to keep up the price of coal, in order that the least possible quantity from their mines, may enable them to support their nefarious stock gambling in the city. This, together with the infamous policy pursued by other companies, as deeply dyed in such inniquituous management as this, is the cause for the lack of fuel on our sea board, and hence the application to Congress to abolish the duty on foreign coal, and thereby take out of our hands a vast amount of labour and money. Now you all know, that there is coal enough in Pennsylvania to supply the demand throughout the United States for centuries to come, provided that belonging to individuals were not kept out of market by the unjust monopoly exercised by a few aristocratic stock gambling companies. You are aware too, that there is coal enough in the Lackawanna valley to furnish employment to almost any number of miners and labourers, and that the consumption is adequate to any quantity that could be sent away. But you are aware also, that the whole mass of coal in the Lackawanna valley is locked up in the bosom of the earth, except that comparatively small portion belonging to the Delaware and Hudson canal company-and that their operations are of so uncertain a character that we may be turned out of employment at any moment, to consume our past hard earnings in idleness or flee to some other quarter, for the means of future support. It has been so in times past, and the same distressing times may occur with us again. Many of us were induced under the expectation of constant employment to purchase property and erect dwellings for our comfort. But no sooner were we thus comfortably seated, than we were thrust out of employment, and our property and dwellings, by this means, were sacrifized at the *out-cry* of the Sheriff and Constable and thus our families were cast upon

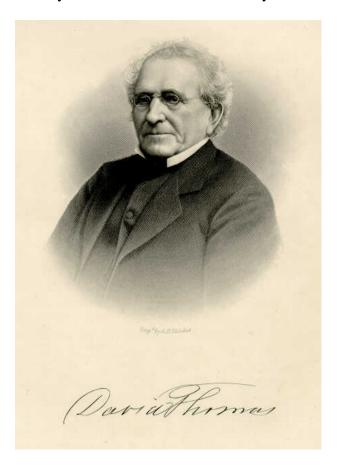
the world, without a home, and exposed to the piercing wintry blast. I do not allude to those and incidents for the purpose of harrowing up the feeling of such as were the subjects of them; but to show the community the wrongs we have suffered at the hands of those whom we were lead to believe would protect and cherish us in a land of strangers—and to suggest a mode by which the evil might be remedied, if the company had the magnanimity to deal justly towards us and this community. Against the agents of the company in this place I have not aught to say; they are high minded, honourable men—they act under instructions derived from a club of incorporated aristocrats, and would grind us to powder. Give us the Lackawanna Rail Road and this community will thrive. Give us the Lackawanna Rail Road and there will be such a demand for our services as will dispel the fear of coming to want so long as we are able to swing the pick. But there is another mode by which the same end might be attained:--and that is, let the Delaware and Hudson Canal Company throw open the road to fair and equitable competition; and individuals owning coal land in this valley, would aid them in supporting the market, which the tolls they would receive on the rail road, and canal would yield them a handsome revenue. This, I am told, the company once faithfully promised to do. Let them redeem their promise ere it is too late to save themselves the mortification of bowing to the mandate of the Legislature, from whom a committee of investigation is now earnestly asked on the part of an injured people. That committee if appointed will embody too much Pennsylvania democracy, to wink at evidences of a corrupt monopoly. If rottenness is found in Denmark they will probe it to its core. / Brutus." (Northern Pennsylvanian, Saturday, February 11, 1837, p. 3)

Part II: "For the Pennsylvanian. / Mr. Editor:--In your paper of the 11<sup>th</sup> instant, I submitted a few hints to my fellow miners, in reference to the Delaware and Hudson canal company; -- And in corroberation of what is there said, respecting the gambling going on in their stock, I get leave to refer to a statement found in the National Gazette of the 11<sup>th</sup> instant, taken from a New York paper, wherein it is stated among other things that "the sales of the stock, (Del. and Hud.) yesterday, here and in Philadelphia, amount to 8000 shares and with Monday's sales, to over eleven thousand shares, or about two thirds of the whole capital of the Company." There you have gambling with a vengeance! Only think of it. Here is a huge corporation with banking privileges, located in the city of N. York, exercising dominion over a large section of Pennsylvania--and whose paper constitutes the principle circulating medium for this whole region of country--and two thirds of the stock of that corporation sold by brokers in two days. Eleven thousand shares of the stock of a banking company, thrown into market in two days and sold for what it would fetch! And where was the other third of this fancy article at this time? Why probably in the hands of these same brokers; for it is known, that when stocks run low, the broker sells no more than to enable him to meet his present emergencies, reserving the balance for a higher price; so that it is probably true, as was remarked by a person will acquainted with the management of this concern, that its stock is a sort of gambling currency, kept for gambling purposes, and thrown from hand to hand among the immediate managers of the tables at N.

York. But what is worst of all, Pennsylvania is compelled to be a partaker in the sin, by having granted, at an unguarded hour, corporate privileges, to a nest of speculars in a sister state. / BRUTUS." ((Northern Pennsylvanian, Saturday, February 15, 1837, p. 3)

#### **David Thomas and Iron and Anthracite**

From 1840 on, the iron industry in Pennsylvania used a large quantity of anthracite coal. This new use for anthracite coal was, of course, good for business. The man who wedded the iron industry and the anthracite coal industry in America was the Welshman, David Thomas.



From Wales to Pennsylvania The David Thomas Story. Peter N. Williams, Wales Books, Glyndwr Publishing, 2002.

- --David Thomas was born in 1794 a "Ty Llwyd," the family farm, situated at...Bryn Coch, Cadoxton Parish, just up the valley from Neath,... a few miles east of Swansea.
- --Thomas worked at the Ynyscedwyn Iron Works (George Crane, general manager and part owner) at Ystradgynlais, for 22 years. The Ynyscedwyn Iron Works lay at the edge of one of the largest coal fields in the British Isles.
- --On February 5, 1837, David Thomas succeeded in smelting iron ore with anthracite as the only fuel.
- --In the spring of 1839, David Thomas (age 45), his wife Jane (nee Elizabeth Hopkins), with their three sons (John, David, and Samuel) and two daughters (Jane and Gwenllian), emigrated to America.
- -- On July 2, 1840, at Catasauqua, Thomas "blew in" the first sustained commercial anthracite iron furnace in the United States.

David Thomas, a Welshman, perfected the process of making iron with anthracite coal, and oversaw the development of the first sustained commercial anthracite furnace in the United States, at Catasauqua, PA, on July 2, 1840.

For centuries, British iron makers used wood-based charcoal to fuel their furnaces. As British forests became depleted, however, they turned in the 1700s to bituminous coal, which they "cooked" or reduced to yield a longer burning, cheaper high-carbon as furnace fuel, a high carbon substance called "coke".

Anthracite coal offered a potentially even better fuel for iron making, but required intense heat to burn it. The technology to create that heat was developed by Scotsman James B. Nielson, who in 1828 patented an apparatus that recycled hot gasses blown out the top of an iron furnace back into the furnace, preheating the air blast and raising the temperature inside the furnace.

David Thomas was born in Cadoxton, near Neath. He obtained a job at the Yniscedwyn Iron Works (George Crane, owner), in Ystradgynlais in the Swansea Valley, soon becoming plant manager. He constructed an improved "hot blast" furnace that maintained temperatures previously unthinkable for iron makers. On February 5, 1837, Thomas used a hot blast to smelt iron ore and anthracite coal. The result was an easy method to produce anthracite iron, which revolutionized industry in the Swansea Valley. This type of iron had been patented by Edward Martin of Morriston, Wales in 1804.

The result was a boom in European iron production and jealous interest from Pennsylvania manufacturers who had easy access to anthracite.

Pennsylvania ironmasters had been slow to adopt bituminous coal and coke as a fuel, in large part because of the abundant supply of wood in the forests of central and western Pennsylvania. Wood shortages in the Commonwealth and the presence of the huge anthracite deposits in northeastern Pennsylvania motivated Commonwealth ironmasters in the 1830s to begin their own experiments with anthracite hot blast technologies.

In the summer of 1838, Josiah White and Erskine Hazard, founders of the Lehigh Coal and Lehigh Navigation Company, read about Crane and Thomas' successes at Yniscedwyn. In 1839, Solomon Roberts (nephew of Josiah White) and Erskine Hazard journeyed to Wales to procure rails for his uncle Josiah White and Erskine Hazard's Lehigh Coal Ashley Planes railroad. Roberts and Hazard tried to convince George Crane to come to America and make rails for them. Crane said no, but suggested that David Thomas go instead. He did so.

Roberts and Hazard signed David Thomas to a five-year contract to introduce hot-blast iron making to the Lehigh Valley. The Lehigh Valley region, being rich in both anthracite coal and iron ore, was the perfect setting for Thomas's creation.

Hot-blast/cold-blast: A cold-blast furnace can not produce a temperature high enough to melt iron ore, and a result the furnace clogs. Therefore, in order to use anthracite as a fuel for puddling (converting cast or pig iron into wrought iron) a new firebox and grate design and the

addition of a forced hot-blast, with the draft passing through the fuel and not over its surface, had to be developed.

Thomas and his son, Samuel, walked into the infant community of Catasauqua, Pennsylvania on the Lehigh Coal and Navigation Company's towpath on July 9, 1839. The Crane Iron Company was immediately organized (Thomas directed the Crane Iron Works, 1839-1855) and Thomas oversaw the construction of five furnaces for the Lehigh Crane Iron Company on the banks of the Lehigh River at Catasauqua. (Thomas' furnaces at Catasauqua employed a hot-blast method originally conceived by James Neilson and two associates in Scotland in 1828.)

On July 2, 1840, Thomas "blew in" the first sustained commercial anthracite iron furnace in the U.S. (Lehigh Crane No. 1 furnace at Catasauqua in Lehigh County; this furnace used a separate coal-fired stove to heat the blast), and the following day its first cast was made. This was a monumental moment in the history of American industry. For this success, he earned the title of the "Father of the anthracite iron industry." In 1840, there were seven anthracite blast furnaces. In 1842, Thomas blew-in Lehigh Crane No. 2, designed in the developing American style, with the stove mounted atop the furnace and using waste heat from the stack to produce the hot blast.

Two years later, in 1842, William Henry made pig iron, using anthracite, in Scranton. Henry could not have set up his iron works in Scranton if he had not been able to persuade Seldon Scranton, his son-in-law, and George Scranton, Seldon's brother, to invest \$20,000 in the venture. The Scrantons, who operated the Oxford Iron Works in Oxford, NJ, made the equipment for Henry's furnace and sent it to him directly. George Scranton ultimately took over Henry's operations.

The Scrantons decided to make rails. The New York and Erie Railroad could not get the rails it needed to complete its line from Port Jervis to Binghamton (it had to complete the line before January 1, 1849, when the railroad's charter was to expire). The Scrantons persuaded the Erie to give them the contract for the needed rails and also to advance them the money, \$90,000, they needed to construct a rail mill. The Scrantons provided the Erie with all the rails they needed—just four days before the deadline. The Scrantons then quickly became very successful.

Thomas's iron works was extremely successful, even though the iron industry in the rest of the Lehigh Valley had begun to decline. The company was incorporated in 1839 as the Lehigh Crane Iron Company, and in 1872 the name was changed to the Crane Iron Company. By that time the community was no longer known as Cranesville, but as Catasauqua; Thomas had named both his company and the town in which he founded it after his former employer in Wales.

Iron produced at the Crane Iron Company was used in a number of products, many of which were made elsewhere in Catasauqua. The neighbouring company of John Fritz's Iron Foundry used Crane iron to build the first American-made cast-iron construction columns, while the

nearby Davies and Thomas Foundry turned Crane iron into pipes and tunnel tubes. Among the still-existing structures which were created using Crane iron are the Holland and Lincoln Tunnels in New York City.

(Much of the above information on David Thomas given above was learned from Alfred and Hungerford A. Mathews' *History of the Counties of Lehigh and Carbon*, Philadelphia, 1884.)

A tragic accident took place in late November/early December 1840, when John Morgan, a young man who was the sole support of his parents and of several small children, was killed by the accidental explosion of two kegs of power in the mines. Here is the account of the accident that was published in *The Carbondale Journal* of December 3, 1840:

"SAD ACCIDENT.--John Morgan, one of the young men employed in the mines at this place, came to his death last week, by the accidental explosion of two kegs of powder. He was getting powder to prepare a blast, and not using sufficient precaution ignited the whole, by a small lamp which he carried. He was dreadfully burned and lived but a few hours after the accident occurred. What renders this dispensation more afflictive, the young man was the sole support of his parents and several small children, his father being disabled from exposure in the mines." (*The Carbondale Journal*, December 3, 1840, p. 2)

### January 12, 1846 Mine Cave-In at No. 1 Shaft in Carbondale:

The January 12, 1846 mine cave-in in Carbondale was the worst mine disaster, up to that date, in the anthracite fields of northeastern Pennsylvania.

The mine: Old No. 1 Shaft (in No. 1 Drift, opened in 1829; and in No. 2 Drift, opened in 1830), near Pike and Sand Streets, Carbondale. The roof of this mine fell in over a space of half a mile long and forty rods wide, covering nearly 40 acres. Sixty men were trapped, of whom all but fourteen succeeded in effecting their escape. The bodies of five were not recovered at the time, but one body was found in the 1920s by a miner who was working there in the No. 1 operation.

Alexander Bryden rescued two of the trapped miners: Mine Foreman John Hosie (brought out after being trapped for more than 60 hours) and Dennis O'Farrell (leg broken by a large piece of coal violently shot from a pillar by the great pressure of the strata overhead).

There are ten basic texts that one should read to gain an understanding of the Carbondale January 12, 1846 mine cave-in. Here are those texts:

1. A reprint of the obituary of Alexander Bryden that was originally published in the August 25, 1854 issue of the *Carbondale Transcript and Lackawanna Journal* (p. 2), and reprinted on page 3 of the March 8, 1873 issue of the *Carbondale Advance*. Included in that obituary is a description of the 1846 mine cave-in that was written by the Henry S. Randell, Esq. and published in the August 12, 1846 issue of the *Courtland (N. Y.) Democrat*. Here is that obituary, preceded by the lead-in that was provided by *Carbondale Advance* in 1873:

"We copy the following by request, but very cheerfully, from the Carbondale Transcript of August 25<sup>th</sup>, 1854. It will interest our readers, as a just tribute to a former excellent citizen, and as an important and interesting part of the local history of our town: / DIED-- / In this city, on Sunday, 20<sup>th</sup> instant, of dysentery, **ALEXANDER BRYDEN**, **Esq.**, in the 55<sup>th</sup> year of his age. / Mr. Bryden [Great Scot] was born in Ayrshire, Scotland. He made this country his home, attracted more by an ardent admiration of the Republican institutions of our government, than by any desire of wealth or distinction or the mere love of adventure, which actuates many to such untrodden shores. / The prominent characteristics of the man, while living, were a highly cultivated social nature; an extreme sensitiveness to the sufferings of others; an almost reckless unselfishness in the hour of danger; an unswerving regard for truth, amounting nearly to idolatry, and an inflexible sense of right and justice—scorning ever all artifice and indirection. Overlaying and adorning these qualities was that charm of modesty, ever accompanying true merit, and which, while it rendered him the most gentle and unassuming of men, disarmed even malice itself of the desire to sully, with the faintest breath, the spotless purity of his reputation. / In his business relations with the Delaware and Hudson Canal Company as Superintendent of the mines, he is understood to have given perfect satisfaction, as well as to all those under his control and superintendence. / His funeral was attended by a very large concourse of our citizens, by his brethren of the Order of Odd Fellows, by the entire city Fire Department (he being Chief Engineer), and by many sorrowing friends from the adjacent towns. In his death this community has met with an irreparable loss: one which may well be regarded as a public calamity. The workingmen have buried a friend equally ready to counsel and assist; but his family have suffered a deeper bereavement—they weep a husband and father 'gone to that bourne whence no traveler returns,' and have a just claim upon the sympathy of the whole community. / As the best practical commentary which it is in our power to make upon the character of our deceased friend, we copy from a number of the Courtland (N. Y.) Democrat published August 12<sup>th</sup>, 1846, a description written by Henry S. Randall, Esq., of an incident in the life of Alexander Bryden which can never be effaced from the memory of our citizens, until they, in their turn shall have followed him to his last resting place. / \* \* \* \* \* 'A point in the mines had begun to 'work,' in miners' phrase, that is, to crack and give indications of an approaching 'fall,' some days prior to the catastrophe. But it ultimately came sooner, and extended over a much larger space, than was anticipated. Bryden was at the pump-house, and observing an unusual commotion, at the mouth of the mines, proceeded to ascertain the cause of it. Men 'whispered with white lips' of some terrible disaster, but no one could give him any intelligible account of it. He entered one of the galleries, and soon met three men who informed him that a portion of the mines had fallen in,

and that they had left behind sixteen or eighteen men, who were already crushed, or shut out forever from the light of day. They be sought him to retire, as there was no hope or possibility of rescuing their comrades. The gallant Scotchman hesitated not one instant. He flew along the passages, the roar and crash of the splitting and grinding rocks every moment sounding louder and nearer to his ears. He reached the verge of the 'fall.' The superincumbent mountain was heaving and rending, as if an earthquake were tearing its rocky strata. Vast masses of slate were detaching themselves, and falling into the passages, with reports like the loudest thunder. Into these choked passages, amid the falling rocks, the noble-hearted Scotchman rushed on. The passage is entirely closed--no; --the huge slabs have fallen so as to leave a narrow opening in the angle formed by an angle of the floor and one of the sides of the gallery. On his hands and knees he creeps on. Now the opening has diminished so that he absolutely forces his way along with no hands and feet, lying nearly prostrate on his face! / About a mile from the mouth of the mine, he found the eighteen men in a gallery or heading where there was solid coal all about them, and oh! joy of joys! his own son was among them! Bryden was on the point of leading out the men, when he learned that another lay wounded in a chamber four or five hundred feet off, in the most dangerous part of the 'fall.' Was it his brother?--was it his bosom friend?--was it a wealthy or influential man, who might advance his rescuer's interest, who lay there helpless, to die a miserable death? He was a common laborer--a poor Irishman. Mr. Bryden had satisfied, nay more than satisfied, the calls of duty and humanity. If the love of praise had stimulated him, (which it did not,) he had earned enough. If the father had felt a premonition that he might be struggling for his child, that child was found. The man was badly wounded, and might only be carried out to die. Was he not, bound now to take heed for his own safety--to lead and guard his own recovered son back through the perilous path? Not thus did that great heart commune with itself. With a word of indignant censure to the men for not bearing their wounded comrade with themselves to the gallery where found them [emphasis added], he pointed out their path, bade them escape, and then turning back, entered a path more perilous and difficult than his preceding one. He nears the chamber. A cry from the wounded and prostrate man, who descried his advancing light, brings him to his side. Mangled and helpless, he could not stand, and shrieked with pain as he was lifted up. When placed on Bryden's back, he had not even strength to hold himself on. The former, placing the flaccid arms of the wounded man around his neck, and crossing on his breast, grasped them with one hand, his miner's lamp with the other, and thus commenced retracing his steps! For rods he bore him on his hands and knees! When the rocks were too low even for this, and could not be clambered over, he partially dragged him, and the man, who was now somewhat revived, partially assisted himself! Thus through perils which no man can appreciate, who has not strode through those gloomy caverns, he bore him a full mile-bore him to the light of day and to safety! What is the bravery of the warrior, excited by the hope of glory, / '---the neighing steed and the shrill trump, / The spirit-stirring drum, and the earpiercing fife, / The royal banner; and all quality, / Pride, pomp, and circumstance of glorious war,' / to the disinterested heroism of this act! The Romans awarded a civic crown, the highest military reward, to him who saved the life of a citizen. He who bore it took his seat next the

Senators in the theatre, and those haughty warriors and sages rose up, to honor him as he entered. Shall no testimonial perpetuate the memory of an act by which the lives of *eighteen* American citizens were saved from peril more imminent than that of the battle field, or any of those ordinary casualties, where man risks his life for his fellow man? \* \* \* \* \* His form, though well knit and sinewy, betokens no extraordinary physical power. A placid gray eye, a well arched nose, curling locks of light brown escaping under his Scotch cap--intonations of voice, modulated to 'more than woman's mildness'--a reserved, modest, and unassuming demeanor, are external traits which would strike any observer; and perhaps few could see, under this unpretending exterior, the man who could do and dare what he has done and dared! But there is a firmness in those gentle tones, a deep earnestness and truthfulness--a quiet but unwavering decision--an utter merging of self--a gushing tenderness of feeling, which pervade the whole man, which, would lead the deeper analyst of character, to expect the legitimate manifestations of these united traits. A high sense of duty and overflowing humanity, it was, and was alone, which prompted his heart and his hand in that dreadful hour.' " (*Carbondale Advance*, March 8, 1873, p. 3)

In September 1899, P. S. Joslin contributed a series of articles to the *Carbondale Leader* on the early history of Carbondale. In the article in that series titled "CARBONDALE IN ITS I[N]FANCY. / A Series of Articles on the Early Days of the Anthracite City by One of Its Pioneers," published on September 16, 1899, p. 2, Joslin presents biographical sketches of Alexander Bryden and John Hosie, co-superintendents of the D&H mines. Here is P. S. Joslin's biographical portrait of Alexander Bryden:

"Alexander Bryden was born in Daily Parish, Ayrshire, Scotland March 6, 1799. He was brought up about the coal mines of Ayrshire and became a coal miner, shaft sinker and mine foreman. / In the year 1836 he leased a coal work upon the Polquhirter estate at New Cumrock, Ayrshire. He also leased a coal work upon the Downieston estate, at Patna, which was drowned out by the River Doon breaking into it. / In the year 1842 he emigrated to America, and came direct to Carbondale. In July of that year, work was very dull, and hard to get about the mines, and he took such work as he could get. His first work for the Delaware & Hudson Canal company was with Hugh Brown, foreman of day laborers, but very soon he was given charge of the pumps which drained the water from the deep mines. / In March 1843, he was appointed mine foreman, to take the place of Archibald Law, who was permanently disabled by a fall of roof and coal.

[The e-mail given below was received from out of the blue on the CHS&M webpage e-mail on 09-01-09:

September 1, 2009

MALCOLM LAW 7686 FORRESTAL RD SAN DIEGO, CA 92120

Daytime Phone: 619 265 0950

Evening Phone: 619 265 0950

Email: MALJOYL@COX.NET

I am the great-great grandson of Archbald Law born in Wanlockhead, Scotland in 1799. In Scotland he trained and worked as a mining engineer. In 1830, he emmigrated to the United States and settled in Carbondale, Pa. and was employed by the Delaware and Hudson Coal Company as a mining engineer. Mr. Law put in the first underground mines for the D&H Coal Company replacing strip mining then in vogue with a vertical shaft. During an inspection of mine pumps Mr. Law was injured by a fall of rock leaving him in considerable pain and with paralysis of his lower limbs. Mr. John Wurtz, President of the D&H Coal Company called to see him and had a wagon especially built for him and had him transported to New York City to see Dr. Valentine Mott. Unfortunately Dr. Mott was unable to relieve him of his pain and suffering. Mr. Law died in June 1848. Mr. Law's innovative engineering transforming anthracite mining methods was commemorated with a monument located in Carbondale on the occasion of the fiftieth anniversary of the city of Carbondale. (I have a picture of the monument on my computer)

[SRP reply]

09-01-09

Dear Mr. Law:

We are very pleased to have the information about Archibald Law, very pleased indeed. Thank you.

The monument of which you speak still stands on the site of the first deep underground anthracite mine in America, and we are very proud to have such an important historic site in Carbondale.

We would be very pleased to have an electronic copy of the photo of which you speak.

[Mr. Law sent a copy of the photo he has. Here is a portion of my reply of 09-02-09 to him: "The monument in the photo that you have (in the form of an obelisk) is located in Carbondale's Gravity Park. It is a commemorative monument that was erected in the 20th century by the D&H (after the Gravity Railroad closed in 1899) in the middle of what was formerly Plane No. 1 on the Gravity Railroad. / It is not the monument, erected in 1901, when the City of Carbondale as an incorporated entity was 50 years old, that marks the site of the first deep underground anthracite mine in America (which was opened in 1831). That is the monument in the two photos that I sent to you--located just west of the 7th Avenue crossing of the D&H, on Carbondale's West Side.]

In Carbondale's oldest cemetery, Maplewood Cemetery, eleven members of the Law family are interred. Attached is a copy of the relevant page from the interment records.

The cause of death, in the interment records for Archibald Law, who died on July 4, 1848 at age 51, is given as "Hurt in Mines." The Widow Law" in the interment records, who died at the age of 79 on February 7, 1876 is probably the widow of Archibald Law. Her cause of death is given as "old age - pneumonia."

Sincerely,

#### S. Robert Powell]

I sent a copy of the above e-mail to John Buberniak, who included the following information in his reply of 09-01-09:

"Was the chief engineer in Scotland of the Duke of Buccleuh, and he came to this country on the invitation of the Delaware & Hudson Railroad to take charge of their extensive mining operations. This was in 1830, when he was thirty-one years of age, and to him is due the praise for the introduction of the present method."

Most interestingly, Alexander Bryden, like Archibald Law, was a "shaft sinker and mine foreman" in Scotland before he emigrated to the United States: ". . . Alexander Bryden was born in Daily Parish, Ayrshire, Scotland March 6, 1799. He was brought up about the coal mines of

Ayrshire and became a coal miner, shaft sinker and mine foreman. / In the year 1836 he leased a coal work upon the Polquhirter estate at New Cumrock, Ayrshire. He also leased a coal work upon the Downieston estate, at Patna, which was drowned out by the River Doon breaking into it. / In the year 1842 he emigrated to America, and came direct to Carbondale. . ."

He continued in that position until the beginning of the year 1852, when he removed to Pittston, to take charge of the Pittston Coal company's work at that place. He held that position until the first of January, 1854, when he was appointed mining superintendent of the Delaware & Hudson canal company's mines, which position he held until his death on the 20<sup>th</sup> of August, 1854. / At his death he left a widow and twelve children. Mrs. Bryden and four of the children have since died. The children still living, in order of their ages, are Andrew, Catherine, widow of William Law, Adam, William, Mary, Mrs. Edward Inch, Margaret, Mrs. Martin Holdich, Janet, Mrs. O. P. Miller and John A. / We do not know what his education advantages were in Scotland, but here he exhibited a literary turn of mind, and in order to avail himself of the benefit of the best literature and history of current events, he with the aid of Mr. Clarkson, succeeded in founding a circulating library of the foreign and domestic quarterly and monthly magazines. He interested a large number of the miners and mechanics in the enterprise, by which means, at a small expense to each, every one had access to all the current literature of the day. / One of the events which will keep in memory his fearlessness in time of danger is that fatal fall of rock and coal in the mines here on the 12th day of January, 1846. About forty acres of the roof gave way, crushing props and pillars. The men had just gone into work, and fourteen were crushed to death, one of the mine superintendents, John Hosie, was entombed with the others. Mr. Bryden did not relax his efforts to relieve any one who might be living. After about forty-eight hours, Mr. Hosie came within hearing distance. Mr. Bryden had to crawl through a very narrow opening and over fallen coal and rock to get to him. He carried him, when he could and drew him over places where they could not stand, until they reached the outside. Mr. Bryden stated that after so long a time had elapsed since the fall, he could hear the cracking of the coal and rock, showing that it was still settling over them. / Next week we expect to give a vivid account of that disaster written by Andrew Bryden, a son of Alexander Bryden, who was also in the mine at the time. . ." (Carbondale Leader, September 16, 1899, p. 2)

In the biographical portrait of John Hosie that is given in *1880* (p. 438J; written and published during Hosie's lifetime) is the following description of John Hosie's entrapment and escape from the 1846 mine cave in: "January 12<sup>th</sup>, 1846, occurred a most thrilling and memorable event in the life of Mr. Hosie, which put to the full test the indomitable will and magnificent pluck of the man, so strongly shadowed forth in the boy, and which at the time was heralded to the farthest limits of civilization. About 8 o'clock in the morning of that day he went into Mine No 2 level at Carbondale. He had been in the mine less than an hour when about forty acres of the overhanging rocks and earth caved in. He was alone and very near the center of this fall.

Fifteen miners in other parts of the mine were instantly killed by the concussion of the air [emphasis added]. Mr. Hosie was saved from instant death by the refuse coal which is ordinarily left on the bottom of the mine. As it was he was pressed between the fallen rocks and the bottom of the mine, with barely space left for his prostrate body. In utter darkness, with nothing but his bare hands to work with, for twenty-four hours, every one of which seemed an age, he dug for his life, throwing behind him the fallen debris and refuse coal upon which the fallen mass rested. His fingers were worn to the bone and still bear the marks of the terrible struggle. At length he reached a place where he could stand up, only to find, however, he was still inside the fall. He attempted to reach the air shaft, but did not succeed. It finally occurred to him that by following the break in the overhanging rocks made next to the line of solid coal he might work his way to the main entrance. Following up this thought he finally, after having been literally buried in this living tomb for forty-eight hours, effected his escape. He had been given up for dead, as it was known he was in the very center of the fall, having been seen there by a mule driver as he was passing along just previous to the fall. He met a party of miners before reaching the entrance, who had entered the mine for the purpose of digging for his body. Instead, they found a pretty lively corpse in the person of Mr. Hosie himself approaching them. The news of his escape sent a thrill of joy throughout the country. It would not be in the power of pen to describe the feelings of the young wife, who had given her husband up for lost, when the glad tidings were borne to her that he was yet alive."

- 2. "The Mine Disaster of 1846. / Many of our older citizens remember very distinctly the particulars of that terrible calamity in our mines in the year 1846. But others, embracing a large majority of our present residents, are not acquainted with the details of the catastrophe. / As a matter of interest to all, we again spread out the whole matter in our columns. We commenced last week, with the sketch of A. Bryden Esq., written soon after by Hon. Henry S. Randall; we follow this the present week by the sketch written by Rev. Henry A. Rowland, then Pastor of the Presbyterian church in Honesdale, and the account of it given in the *Carbondale Democrat* at the time. By these combined, a condensed and reliable account of the catastrophe will be obtained, and in a good shape for preservation." (*Carbondale Advance*, March 15, 1873, p. 3) Here are the two articles referenced in this cover article from the March 15, 1873 issue of the *Carbondale Advance* that were published in that same issue of the *Carbondale Advance*:
- 3. Account of the accident that was originally published in the *Carbondale Democrat* on January 16, 1846 (four days after the cave in). The original article was removed from the bound volume of newspapers by someone before the bound volumes came under the care of the Historical Society. Here is the original account of the accident from the January 16, 1846 *Carbondale Democrat*:

"DREADFUL CATASTROPHE!!! -- Upwards of SIXTY Persons buried alive! FOURTEEN still missing! -- About nine o'clock, on Monday morning, an accident occurred in the mines, in our village, more appalling and dreadful than any that have before taken place here, or that has come within the knowledge of the eldest among us. The roof the mines fell in almost simultaneously, to the extent of a half mile, or upwards in length, and about forty rods in width-burying in its fall, or shutting up in subterranean caverns, about 60 workmen--Of these 46 have escaped through the various chambers, some with little injury, others severely wounded, but sad to relate, fourteen--dead or alive--are still imprisoned in the bowels of the earth. / The No. 1 mines had been 'working' (i.e., the pillars had been groaning, or cracking, under the weight of the mountain that rested upon them,) for some days, but as the phenomenon was not new, nothing serious was apprehended from it. The effect of such 'workings' is generally inconsiderable, extending but a few yards and producing no other danger or inconvenience, than what is occasioned by the falling of pieces of slate, of which even there is sufficient warning, to enable one to escape from its reach. / On Monday morning of the present week, Mr. Clarkson, the mining Engineer, went into the mines, before the hour of commencing work, to examine their condition. Though all seemed quiet, to increase the safety, some additional props with roofings were ordered to be put up. The workmen had been but a short time in the mines, when a heavy cloud of smoke, and dust, were seen rushing out of mouths of that and the adjoining mine, attended with a current of air sufficient to remove cars, large stones &c. with its force. Workmen, that were then entering, were raised from their feet, and thrown violently backward against pillars and other objects, many of them receiving severe wounds. / A driver, Patrick Clark, had his horse instantly killed, and he was thrown so violently against the cars, as to break several bones, and cause his death the next day. Hugh Fitzpatrick and John M'Kale were severely hurt in the same manner. Dennis Farrell, was nearly killed by stones falling upon him. His brother to relieve him ran for an iron bar, and has not been seen since--he has probably perished. Mr. F. was afterwards extricated from the stones by two other men, and placed against the side of the mine, where being wholly disabled, he was left, while they ran for their lives, from under the falling mass. He was afterwards brought out by Mr. Bryden, Assistant Engineer, though at great peril to himself. Mr. Bryden deserves great credit for his courageous and energetic efforts to save those who were involved in this calamity. / Mr. John Hosie, an overseer, was for 48 hours supposed to have been lost-but, after encountering numberless dangers, and difficulties, was enabled to work his way out. An account of his adventures, while it would be of much interest, we are obliged to omit. Having been but recently married, the feelings of his wife during the time, may be imagined but cannot be described. / The following named persons are still confined to the mines. It may be that some of them are still living, but there being little hopes of reaching them in less time than one week, but a faint prospect appears of recovering them alive. Their names are, Patrick Leonard, Henry Moore, James Magrath, Patrick Walker, Patrick Mitchell, John Brennan, Peter Cawley, Anthony Walsh, Mark Brennan, William Clines, Michael Tolan, Henry Devany, John Farrell, and Ebenezer Williams; the first thirteen are Irishmen, the latter a Welchman. All leave families, dependent upon their labor. Patrick Walker, John Brennan and

Patrick Clarke, were the support of widowed mothers. / The Company have placed different sets of hands on the roads leading to where these unfortunate men are supposed to be, who labor with unremitting energy night and day to effect a passage through the ponderous masses of slate and earth. No greater efforts for their recovery, could perhaps be made than are making--every avenue of access has been explored, and the most efficient means adopted to effect the object."

4. The Carbondale Democrat article from January 16, 1846 was also republished, with an editor's introduction, in the Carbondale Leader of Tuesday, January 5, 1886 (p. 4). Here is the introduction to the Leader's reprint (1886) of the Carbondale Democrat's January 16, 1846 article: "Commenting on the recent terrible mine accident at Nanticoke, the Scranton Truth refers incidentally to a similar catastrophe which occurred in Carbondale many years ago. The Truth fixes the time in 'the winter of 1843,' which is an error of three years.[The Truth was perhaps relying on either (1) H. Hollister's History of the Lackawanna Valley, published in 1875, in which Dr. Hollister erroneously reports (p. 364) that "During the winter of 1843 or '44, a portion of the Delaware and Hudson Canal Company's mines, at Carbondale, 'fell in' upon the workmen. . ." or (2) J. A. Clark's The Wyoming Valley, Upper Waters of the Susquehanna, and the Lackawanna Coal-Region, including Views of the Natural Scenery of Northern Pennsylvania, from the Indian Occupancy to the year 1875 (1875: J. A. Clark, publisher, Scranton, PA) in which, in his 28<sup>th</sup> chapter, "Delaware and Hudson Canal Company (pp. 106-154), Clark, like Hollister, both published in 1875, incorrectly gives the date of the great Carbondale mine cave-in as 1843-44: "... But an unfortunate event occurred during the winter of 1843-44, by which sixteen lives were lost. The roof of a portion of the mines. . . "(p. 143). Interestingly, the body of Clark's account (pp. 143-44) is an exact copy, fully acknowledged, from Hollister (pp. 364-66). Hollister's account of the accident, it should be noted, although interesting to read, is more imagined than empirically observed, and somewhat melodramatic in its presentation: "...Others, without water, food, or light, shut in from the world forever by the appalling wall of rock, coal, and slate around them, while breathing the scanty air, and suffering in body and mind, agony the most intense, clenched tighter their picks, and wildly labored one night that knew no day, until exhausted they sank, and died in the darkness of their rocky sepulchers, with no sweet voice to soothe, no kind angel to cool the burning temples, or catch the whispers from the spirit land. " (p. 144).] It occurred January 12, 1846. Inasmuch as this accident (which was at that time the most fatal in its results of any similar one in this country) is often spoken of, and many inquiries are made as to the particulars, and especially as we hear and read occasionally incorrect accounts of it, we have thought best to draw upon Esquire Yarrington's files (which he has courteously permitted) and reproduce the statement published a few days after the occurrence. Its perusal will bring to the minds of our older citizens (as it has to that of the writer) in a vivid manner, the terrible agony and suspense which our whole population endured during the time that efforts were made to relieve the entombed miners, and the inexpressible joy when the news came that Mr. Hosie had been rescued. / The following is the account taken from the Carbondale Democrat, of Jan. 16, 1846, published by Joslin & Benedict:--..."

5. Account of the cave-in that was written, January 15, 1846 (three days after the cave in) by Rev. Henry A. Rowland, pastor of the Presbyterian Church in Honesdale at the time of the cavein, and originally published in the N. Y. Commercial Advertiser (and reprinted in the March 5 1873 issue of the Wilkes-Barre Record from a copy of the article in the N. Y. Commercial Advertiser that was included in a scrap book in the possession of Ziba Bennett, Esq.). Here is the complete article from the March 5, 1873 issue of the Wilkes-Barre Record, as reprinted in the March 15, 1873 issue, p. 1, of the *Carbondale Advance*: "The Wilkes-Barre *Record* of March 5<sup>th</sup> says: 'We are permitted to make the following extract from a scrap book in the possession of Ziba Bennett, Esq. Most of our readers do not know, or have forgotten about the cave in at Carbondale, in 1846--the most serious disaster in the coal mines of this region until Avondale. Mr. John Hosie, the hero of the following narrative, called at our office last week, and gave a thrilling description of his difficulties and his feelings while working his way out of the mine. He is now a healthy, vigorous man, with apparently many years of life before him. His adventure at Carbondale, did not frighten him away from the mines, as he is still engaged in the coal business.' / (From the N. Y. Commercial Advertiser.) / LIVING BURIAL AND ESCAPE. / For the subjoined graphic account of the remarkable disaster a[t] Carbondale, and the almost miraculous escape of a man who was buried in the crushed mines, we are indebted to the Rev. Mr. Rowland, pastor of the Presbyterian Church at Honesdale, but formerly of the Pearl Street Church in this city. The narrative is equally interesting and extraordinary: / 'Honesdale, Jan. 15, 1846. / On Monday morning last, about nine o'clock, an accident occurred in the coal mines of the Delaware & Hudson Canal Company, at Carbondale, which has produced considerable excitement in the community. A large portion of the hill or mountain into which the mines extend, following the law of gravity, suddenly descended on the honey-comb cavities within its bosom, burying all the unfortunate victims within its reach. Very many acres descended in a mass; and so great was the pressure of the atmosphere, occasioned by this descent as to shoot out from the mouth of one of the mines, as from the mouth of a cannon, a train of cars with a horse and a boy, throwing them to considerable distance. Think of a bellows moved by mountain power, and you form a very correct idea of the blast. Painful to relate, fifteen individuals were beneath the descending mass, only one of whom has had the good fortune to escape; and his adventures exceeded anything on record. The remaining fourteen are buried alive, if not crushed, and may be now hopelessly wandering in those gloomy caverns, beyond the reach of human aid, and shut out for ever, in all probability, from the light of day. / To present a distinct idea of the occurrence, I must give a brief description of the mines and the manner of working them. There are several openings to the coal, which are numbered 1, 2, 3, 4; &c.; two of them are above the bed of the Lackawanna, the others are below it. These openings are holes in the side of the hill, about six feet by eight, and the main entrances to the mines. From these mouths are roads leading into the interior of the mountain, following the dip of coal, sometimes ascending and sometimes descending. The extent of the mining operations will be perceived from the fact that there are thirty-five miles of railroad laid under ground, in the bosom of the mountain, including the main roads with all their ramifications. / The coal lies in a horizontal stratum of from four to six feet in

thickness, between strata of slate. The method of mining is, to cut out and remove the coal, leaving only piers of it to support the hill above, aided by wooden props made of sections of trees, cut of suitable length. As fast as the coal is removed, the lateral branches of the road are abandoned, and the main avenues pushed on to the coal beyond. In this way the coal has been removed for a mile and a half under the mountain, and the roads extend that distance. About a mile from the mouth of No. 1, an air-hole was cut to the surface, up an inclined plane, by which access could be had to the surface of the earth, and down which props were taken. The excavation for coal extends half a mile or more beyond this opening. It was in this vicinity that the accident occurred, and by closing the mouth of this passage cut off all hope of escape to those within in this direction. / As fast as the coal is removed, no particular care is taken to support the mass above, in the chambers which are abandoned; the props are left to decay that the rock and earth may gradually settle down and fill up these cavities, as it has done in former instances; but care is taken to guard the main avenues to the coal from being thus obstructed. / The coal lies beneath a mass of slate; above the slate is the sand stone rock, and above this are the gravel and soil. I have often noticed, in passing through the mines, that many of the ends of the props, which support the slate above, were shivered like a broom, from the vast pressure on them; and I never saw this indication without thinking what might happen should the mass from above take a notion suddenly to descend, and always breathed easier when I had passed through the mines and emerged to the light of day. / Symptoms of the working of the mass above have been for some time observed; and these symptoms had greatly increased for a few days previous to the catastrophe. Everything was done which could be done in these circumstances to avert danger. No one supposed that the rock above would prove so firm or that it would settle suddenly or in a mass. / Only a few workmen, of whom there are nearly four hundred employed in the mines, had gone in the mines on Monday morning, when Mr. Clarkson, the superintendent, discovered the ominous appearances, and immediately set some hands to work in propping up the slate. On coming out of the mines, about 8 1/2 o'clock, he met Mr. John Hosie, (who is well known on the Croton water- works as one of the ablest masons, and who has been in the Delaware and Hudson Canal Co.'s employment about a year, preparing himself to take charge of the new mines to be opened below Carbondale,) and told him that he had better wait till he could go with him, and they would examine the mines together. / Mr. Hosie went on, however, into No. 2 intending to join Mr. Clarkson presently, and had proceeded about a mile when instantly the mountain over his head had descended with an awful crush of everything which opposed its progress and shot down over him, filling up the road with crushed coal and bending him double, leaving not a foot of space between the solid mass above and the crushed coal below. The distance descended was the height of the mine, or from six feet to eight feet. So great was the pressure of the air that it produced a painful sensation, as if some sharp instrument had been thrust into his ears. All was total darkness, every light in the mine being instantly extinguished. Ever and anon the thunder of the falling masses roared through the caverns. After waiting a suitable length of time for the rocks to cease falling, Mr. Hosie began to remove the loose material around him and to creep. He tried one way and it was closed. He then proceeded in the

other direction; and after nine hours' incessant toil, creeping, removing loose coal and slate, and squeezing himself past obstacles, he made his way into the open mine. Here he tried to strike a light, but his matches had become damp and would not ignite. He then felt around him and discovered by the direction of the railroad that instead of making his way out, he had gone farther into the mine, and was cut off from a return by the mass which had settled down upon the road. He then bethought him of the air-hole, and attempted to reach it; but that passage had been crushed in and closed. Being in the vicinity of the mining operation he found some powder, and spreading it on the floor, endeavored with a pick to ignite it, but could not. He found also a can of oil, which he reserved in case of necessity to use for food. / All was total darkness, and the part of the mountain over him was also settling, throwing off huge pieces of slate, and exposing him to imminent danger at every step; for but a part of the mass above had come down at once, and the other seemed likely to follow. Sensible of his danger, Mr. Hosie protected himself as well as he could; he wound up his watch and felt the time by his hands. He also, with a piece of chalk, wrote in different places his name and the hour when he was at certain points. Being in total darkness, however, he missed his way, but was enabled through his acquaintance with the mines to set himself right. He first tried to reach No. 1, but after toiling to that road, found that it was also crushed in. His only chance seemed to proceed at right angles with the main arteries of the mines and pass over to No. 3, and this he labored to do in accordance with his best judgment. / At one time he passed through a narrow entrance into a chamber, and in endeavoring to creep out on the other side, he was caught in a narrow place by the hill above settling down upon him, and remained in this position about an hour, expecting to die there. But another settling of mass crushed out some of the materials around him, and he was enabled to free himself and draw back into the chamber of the mine. In returning, however, to the hole by which he had effected his entrance, found to his dismay that it was closed; and he was compelled to hunt a new passage, and finally to dig his way out with his hands. / Thus, after working for more than 36 hours, he at length reached No. 3, where he rested, and then when the hill had partially ceased its working, preceded toward the mouth of the mines. On his way he met Mr. Bryden, one of the superintendents, who, with his men, was exploring the cavern with lights in search of him; and at about five o'clock in the morning he emerged to the light of day, having been given up as dead, and been incarcerated in utter darkness beneath a settling mountain for forty-eight hours. Mr. Hosie told me many of these particulars, and the others I gleaned from the principal officers of the Company, to whom they were narrated. / At one time Mr. Hosie saw lights at a distance, but they soon vanished. They were the lights of the men in No. 3, seeking for him. These lights, however, assured him that he was pursuing the right course. Mr. Hosie's hands were scratched and cut up by working, so as to be completely covered with sores. He never for one moment lost his self possession, and to this fact, added to his tact and perseverance, is to be ascribed his deliverance. / There were about forty men in the mines when the catastrophe occurred, and the twenty-six who escaped owed their preservation in a great measure, to Mr. Bryden, one of the superintendents, who conducted them out with great coolness and self possession, while portions of the hill, other than those which first fell, were settling down around them. Learning that one

poor Irish laborer, who had been struck down by slate, was left, with his leg broken, he went back alone and brought him out. Sometimes he was compelled to creep and draw the man after him, through crevices which were soon after closed by the settling of the hill. In two hours more the whole had shut down, so that if he had been left his death would have been inevitable. Thanks to Mr. Bryden for his coolness, intrepidity and humanity. / The greatest possible efforts are now made by working night and day to reach the place where the fourteen were at work; but faint hopes, however, are cherished respecting them. The places cannot be reached before the middle of next week, if then. The probability is that they have been crushed to death. Most of them are men with families. One boy is only known with certainty to be dead. / Except for the loss of life, this unforeseen occurrence is not much to be regretted, nor will it greatly impede the company's operations, since it has occurred at about the time when it is usual to suspend labor for a couple of months to repair for the spring, and everything will be rectified before then. The immense strength of the rock above prevented the hill from settling in the usual way; but now it is down, it is to be rejoiced at as it frees from future danger, and the roads when reopened will be perfectly secure. It was an innovation for it to come down suddenly and in a mass, instead of the quiet, decent way it has adopted in former instances, and no human foresight could have predicted the manner of its descent, nor could human prudence, in the present state of knowledge, have provided against it. / The quantity of the mountain fallen is variously estimated. Mr. Bryden said that it was about three-quarters of a mile long, by half a mile in width. Mr. Clarkson said that it was about half mile long, and an eighth wide. In the former case it would be about 240 acres, and in the latter 40 acres. Mr. Archbald, the chief superintendent of the mines and railroad, whose science and practical skills are not exceeded, estimates the amount fallen at far less than either of his assistants. Since the first avalanche, it must be borne in mind; however, many other portions have gone down. What the extent of the whole is, no one can conjecture, with any approximation of certainty; and it is exceedingly difficult at present to get any information respecting it. / I do not know that the company have any interest either to magnify or conceal the matter, inasmuch as it is more likely to prove a benefit than damage to their future operations. The only expense attending it will be to repair the roads and move the obstructions; but these will then be the safer, and the knowledge acquired by this experience may prove of the greatest utility hereafter. / The occurrence seemed to me so unlike anything I ever heard of, that I commenced writing the account of it to my friends, but it has proved so long, that, to save multiplications of letters, I concluded to send it to your paper, which most of them are accustomed to read; and they may, if they choose, consider it as personally addressed to each of them. There may be others of your readers also to whom it may not be uninteresting. / With sentiments of respect, I am yours, / H. A. ROWLAND."

John Hosie (born 06-03-1812, died 05-07-1881; wife, Julia A. Hosie; both interred in Dunmore Cemetery, Dunmore, PA)

6. "MORE OF THE ACCIDENT. / Since our last paper went to press, the bodies of Patrick Mitchell, Wm. Clines, and Ebenezer Williams have been taken from the mines." (*Carbondale Democrat*, February 6, 1846, p. 2). The earthly remains of Ebenezer Williams were buried in Maplewood Cemetery. See the data from the Maplewood Cemetery interment records given hereafter:

Burial No. 394 (burial made after January 14, 1846 and before February 13, 1846) in the "Record of Interments, &c., Maplewood Cemetery, Carbondale, Lackawanna Co., Pa." reads as follows:

"Williams Found Dead Welch"

The earthly remains of Patrick Mitchell and William Clines are now interred in the New Catholic Cemetery (Russell Park), Carbondale.

Alexander Bryden moves out of Carbondale in 1851:

"ALEXANDER BRYDEN, ESQ.--This gentleman, late a Superintendent of the mining operation of the Del. & Hud. Canal Co., in this place, is, we regret to learn, about removing from our community to take charge of the works of another company, recently organized, farther down the valley. By the native goodness of his heart, the disinterestedness of his conduct, the uniform urbanity of his manners and his sterling integrity, he has won a noble estimation in the affections and esteem of his fellow citizens generally. To the Miners, especially, he is peculiarly endeared by his courageous endeavors, braving every danger, to extricate all whom it was possible to save, from the imminent perils to which they were exposed by the "fall of the mines" some seven years ago, and the "flood in the mines" of last season. We do not believe he has an enemy on earth. The aspirations of this whole community for his future happiness and prosperity will arise to bless him in his new home. (*The Carbondale Transcript and Lackawanna Journal*, Friday, August 15, 1851, p. 2)

7. The Bryden testimonial that was held on December 8, 1851: articles in two Carbondale newspapers on the testimonial: (a) "The Bryden Testimonial" (*Carbondale Transcript and Lackawanna Journal*, December 12, 1851, p. 2); and (b) "*From the Transcript.* / Presentation of a Testimonial to ALEXANDER BRYDEN, Esq., / By the Miners and Citizens of Carbondale City, at the Odd Fellows Hall, Dec. 8<sup>th</sup>, 1851." (*Lackawanna Citizen*, December 19, 1851, p. 2; this is a reprint of the original article for the Carbondale Transcript and Lackawanna Journal of the preceding week, December 12, 1851). Here is the article from the Carbondale Transcript and Lackawanna Journal: "The Bryden Testimonial. / On Monday evening, 8<sup>th</sup> instant, a very large

number of citizens assembled at the Odd Fellows Hall in this city, to witness the interesting ceremonial of the Presentation to ALEXANDER BRYDER, Esq., of a Compass and case of Mathematical Instruments by our Miners and others--to which we alluded in a former number of our paper. / An occasion of tendering to deserving worth so substantial a mark of esteem has seldom occurred, prompted as this was, by feelings of the warmest gratitude towards the recipient. All who have had the pleasure of intercourse with Mr. Bryden, will bear us witness to his correct deportment, modest demeanor and kindliness of disposition: his hand always open as day to 'melting charity,' and his best efforts always put forth to enhance the happiness of all around him, the circumstance of his removal from our midst to another sphere of usefulness seemed to call for some marked expression of the feelings of our people. It was while one of the Superintendents for the D. & H. Canal Company, that the 'Falling in of the Mines' occurred, and none will ever forget the peril he encountered--the incessant toil and perseverance which he manifested, in extricating the unfortunate victims of that fearful calamity. On other occasions he has signalized himself in rendering aid to the Miners when peril was nigh, and it would be indeed strange, if that large and respectable class did not feel a deep sense of gratitude for his manly exertions in their behalf. We are happy that worth is appreciated in our midst, and sincerely hope the 'Compass' may point us all to the polar-star of manly conduct and generous sympathy for our fellow-men, as assuredly as its undeviating course has marked the career of its recipient. / The meeting was organized by choosing Hon. JAMES ARCHBALD, as President of the evening; James Clarkson, John Lee, Edward Jones, Anthony Grady, Henry Evans, Patrick Moffit, jr., Thomas Jones, John Kirkwood, James Hamilton, Neill Fallon, William Morgan, Richard Keating, William Hughes, Terence Powderly, Patrick Kearnes and Joseph Gillespie, Vice-Presidents; and S. S. Benedict and G. M. Reynolds, Secretaries. / The president having stated the object of the meeting, Mr. Anthony Finnerty, in behalf of the Miners, delivered the presentation Address, which was briefly responded to by Mr. Bryden, returning his heartfelt thanks for the kind and flattering manner in which the Testimonial had been tendered him, and more at length in his behalf by Capt. Geo. R. Love. / Able addresses, pertinent to the occasion, were made by Col. Peter Byrne, Geo. Perkins, Evan Harris, Martin Canavan, F. P. Grow and A. L. Mack, Esgrs. / Capt. E. L. DANA, of Wilkesbarre, being loudly called for, rose, and in a felicitous and eloquent strain, enchained the attention of the audience for some time. His remarks were well adapted to the time and circumstances, and none regret his presence. / S. S. Benedict, Esq., in conclusion to some happy and appropriate remarks, offered as a sentiment, the following: / The Miners of Carbondale--Honest men, industrious, intelligent and liberal citizens,--worthy of such an overseer as Alexander Bryden, Esq., whose services they so long enjoyed and so well appreciated. May his successor ever treat them with equal fairness and win just as highly upon their regard. / Before adjourning, the subjoined Resolution, offered by Lewis Pughe, Esq., was unanimously adopted: / Resolved, That the thanks of this meeting be tendered to the Committee of Arrangements for their disinterested labor in bring[ing] about so happy an 'event' as the one we now have the pleasure of participating in. An occasion where honesty, industry and

perseverence, receives a *token of merit* from the hard-working, honest yeomanry of the D. & H. Company's Mines. / The ceremonies at the Hall being concluded, a 'goodlie companie" adjourned to the Saloon of J. H. Estabrook, and partook of an oyster supper. Here the toast and jest were freely passed--and the utmost harmony mingled with the hilarity of the evening. At a seasonable hour the company dispersed, well pleased with the occasion which brought to their memory 'Days of Auld Lang Syne.' " (Carbondale Transcript and Lackawanna Journal, December 12, 1851, p. 2)

8. Obituary of John Hosie: "DEATH OF JOHN HOSIE. / Mr. John Hosie, who was at one time prominently identified with the management of the coal mines of the D. & H. C. Company, and who was a resident of this city for a considerable period many years ago, died in Scranton last Saturday. He was a man of considerable intelligence and of indomitable energy. He was for many years, and up to the time of his death, prominently identified with the coal operations in this region. His connection with the D. & H. C. Company commenced in 1845, and a few months after, he took a thrilling part in the great mine cave in this city. For forty-eight hours he was buried in the bowels of the earth, but was unhurt, and by a series of remarkable providences, finally escaped from his perilous position. Many times during his confinement in the subterranean prison he gave himself up as lost, and each time some incident occurred which gave him new hope, and encouraged him to exert every possible effort to escape. Of seventeen persons who were then entombed, he was the only one who came out alive and many of the buried bodies were never recovered. / Mr. Hosie was sixty-nine years of age, had been a widower two years and a half, and left two sons and two daughters. The funeral ceremonies were conducted by Rev. N. G. Parke, of Pittston, one of his early pastors, who delivered an eloquent and appropriate address." (Carbondale Leader, May 14, 1881, p. 2)

In September 1899, P. S. Joslin contributed a series of articles to the *Carbondale Leader* on the early history of Carbondale. In the article in that series titled "CARBONDALE IN ITS I[N]FANCY. / A Series of Articles on the Early Days of the Anthracite City by One of Its Pioneers," published on September 16, 1899, p. 2, Joslin presents biographical sketches of Alexander Bryden and John Hosie, co-superintendents of the D&H mines. Here is P. S. Joslin's biographical portrait of John Hosie: "JOHN HOSIE. / As Mr. Hosie was co-superintendent with Mr. Bryden in the mines, we think it appropriate to give a brief sketch of his life here. / Mr. Hosie was born in Sterlingshire, Scotland, June 2, 1812. In youth, he manifested a sterling character and in manhood, like the coin of the realm was sterling worth. / His father was a mason and stone cutter by trade, which it appears the son was familiar with and worked at. His education was limited to the common schools of the neighborhood. An elder married sister, whose husband kept a hotel, made him a present of a pony, from which time, when out of school,

he occupied himself in carrying parcels, and when he was fourteen years old, found he had saved about 80 pounds sterling. Then the idea came to go to America and without the knowledge of his parents he purchased a ticket for that purpose. When he informed his mother of his purpose she was surprised and wanted to know where he got his money. He satisfied her, but both parents tried to persuade him to remain at home, but no, he wanted to go and relieve his parents from his support. Finding his mind fixed, they thought an elder brother should go with him. / When they arrived in New York they got employment, John as stone cutter and his brother Andrew as carpenter. After several months near New York, he went to Philadelphia and worked with another brother James, six years. From this time forward, he was engaged in superintending or constructing railroad bridges, viaducts, or any work in stone masonry. / In 1842 he entered the employ of the Delaware & Hudson Canal company in charge of the gravity between Carbondale and Honesdale. In 1845 he became mine superintendent at Carbondale. He was married on the 12<sup>th</sup> of November of the same year to Miss Julia A. Beattys, of Waymart. Two months after that date, Jan. 12, 1846, came the terrible cave in of the mines, in which he was entombed and imagination cannot describe the anguish of that young wife who thought she would never see him again. / After digging in the darkness with his bare hands among the broken coal and rock to try to gain a way towards some opening, he did reach a spot where he could hear the searching parties and making his presence known he was rescued by the aid of Mr. Bryden after being in the mines 48 hours. The flesh of his fingers was worn off to the bones. / Mr. Hosie left the Delaware & Hudson company's employment in 1856. His after life was an active one, being engaged as contractor or superintendent of railroads or mine work in many parts of the coal regions of the state." (Carbondale Leader, September 16, 1899, p. 2)

9. In September 1899, P. S. Joslin contributed a series of articles to the *Carbondale Leader* on the early history of Carbondale. In the article in that series, titled "OUR GREAT MINE DISASTER," which was published in the Carbondale Leader on September 22, 1899, p. 2, Joslin presents the account by Andrew Bryden (one of Alexander Bryden's sons) of that mine disaster. Here is the article: "OUR GREAT MINE DISASTER. / Andrew Bryden Describes the Fall of Roof in Nos. 1 and 2 Drifts in 1846. / P. S. Joslin who is contributing a series of articles to the LEADER on the early days of this city is indebted for the following 'account of the fall in the mines at Carbondale Luzerne county Pa.,' to Andrew Bryden of Pittston. / 'On January 12<sup>th</sup>, 1846, about 8 o'clock in the morning a serious cave or fall of roof occurred in drifts No. 1 and 2 of the Delaware and Hudson Canal company at Carbondale, Pa., by which fourteen persons were killed, six of which were never found, although the company made great efforts to find them. The following are the names of the persons who were killed: Patrick Leonard, Henry Moore, James Magrath, Patrick Walker, Patrick Mitchell, John Brennan, Peter Crowley, Anthony Walsh, Mark Brennan, William Clines, Michael Toolan, Henry Devanney, John Farrell, Ebenezer

Williams. One other person, Roderick Phillips was enclosed in the mines for about twenty-four hours when he was found by Mr. Bryden and helped out. He died suddenly of heart failure some time afterwards the cause of which was attributed to his uncomfortable confinement in the mine. The eight persons whose bodies were found were killed upon the main roads, some of whom were engaged in propping up the roof and encasing the pillars along the level heading. Where the squeeze was the greatest when the fall came it was like a thunder clap and extended over an area of from 40 to 50 acres and over a half mile along the headings. / The bodies of the men found showed evidence of their being killed instantly. All of the bodies were found in No. 1 level and on the plane itself and those not found were upon the plane heading, or in the chambers worked from it. / When the fall occurred I was then at work at the face of the plane heading which was driven into the solid coal about two hundred feet inside of the last entrance driven up from the No. 1 level chambers. Two drivers had just come in for our car and were at the face of heading when the cave occurred. We all felt the concussion very sensibly and our lights went out, but we had no idea that such a calamity had occurred, but in passing out the heading we saw part of the havoc it had made. Loaded coal cars were lifted and thrown off the track and the walls which were built up in the entrances along each side of the heading were blown out by the concussion. Before reaching the fall, we met twenty-five or thirty men running in towards the face of the heading. I asked them what the trouble was, and they said the mine was all caved in and there was no means left for our escape, across the faces of the chambers where we had confidently expected to reach the air slope at the outcropping of the vein. This was a great discouragement to all of us, as we did not expect to be able to get out by going down into No. 1 level as we thought it would be surely closed in, as we imagined that the fall had started from it; on account of it squeezing so that there was no persons working there excepting the party proping. In the chamber below the plane level through which we had to pass, it had partially broken down, and the breaking of the roof was making a great noise, and threatening to fall down, but the party clung closely to the heading as there was no fear of it breaking down, but when some of us would start out to the entrance occasionally, all would follow out, and it took some little time to get them all quiet. When we approached the entrance to hear how it was working, it made such a noise that none dared to venture through it. I proposed that as all means were cut off, from getting out at the outcrop, that we should try to go through the fall or falling ground, and try to get out at some of the lower levels, but we should go in small parties of three or four together, for fear of running over and killing one another, in case of a piece of rock falling upon, or beside us, but the great body of the men were not in favor of that, and some of them said let us all stay, or go out together. I said I would not go out in that way, but would go with the first party, or stay until the last. / About this time, my father, Alexander Bryden, the mine foreman, found his way into us and called upon us to come out. You may be sure it was a welcome call to all of us, and we lost no time in responding to it. When the last of the party reached him he asked if there was any other person left in the mine alive. Some the men said that Dennis Farrell was at the face of the chamber severely injured across the spine so that he could not walk. My father asked if any of the men would go in with him to carry him out, but none of those who came in with him, nor

those that were in before would go, as they feared that the place they had to pass through would cave in before their return. But this did not keep my father from going, so he went in alone, and carried him out to a point where the others could come to his assistance. The distance he had to carry him would be about a quarter of a mile, and the others carried him out upon a board, about a mile and a quarter, to daylight, and from thence to his home. Dennis Farrell was found under a large piece of coal when the miners passed through his chamber. They rolled the coal off him and when they found he could not walk, they set him up in the corner of his chamber, and gave him a light and left him, as they did not know how they were going to get out themselves. / After the piece of coal fell upon Dennis, his brother John, who was working with him, ran into the next chamber to get help to roll the chunk of coal from him and while he was gone the fall came and John was caught by it and was never more seen either alive or dead. / The passage through which we made our way out, between the plane heading and level heading, did not remain open very long after we got out, and it was entirely closed up when the searchers went in after noon of that day and it was not opened again until about a year after. The force of the expelled air at points along the levels was so great that it broke up the cars along the road into small pieces. One driver boy was killed by its force and others were severely injured. / My father with searching parties kept up the search for several days. On the morning of the third day they found John Hosie, mine foreman in one of the headings in the dark. He lost his light when the cave took place and he had been wandering around doing what he could to find the way out. The place in which he was found was visited by the searchers the day before, but he was not there. When found by my father he could only say two words, 'Oh Bryden,' when his heart failed him and he broke into tears. He no doubt had suffered more than any one caught in the fall, as he was in darkness and danger for forty-eight hours. During all this time his young wife was in great distress, on account of his loss, and never expected to see him in life again. While Mr. Hosie was in the darkness and gloom he kept his watch running so that he knew how the time was passing, by feeling the hands of his watch, and it was found out afterwards that he had written on some of the pillars with white chalk, that he was at that point at a certain time of the day, but the searching parties failed to see the writing, when they passed through the entrances, at those points. You may imagine the condition of a man who has been feeling his way over rocks and coal in the dark, for the length of time he had, his hands were torn and bleeding, and his clothes in rags. / In the heading in which I worked we left a fine bay horse which had been in the mines but a few days. We had to leave him in the mines to starve or die for want of air. / After the place was opened up again a year after, I went in to get my tools, and had the curiosity to hunt the remains of the poor horse, and found his bones in a place where the roof was low it having been squeezed down from seven feet to less than four feet high. I also examined along the edges of the fall towards the outcrop, to see whether there was any way to escape in that direction, but I found all closed down tight. On the plane, heading and chambers the fall broke off in what we called the rock roof, where there was no slate over the coal. At some points the hard sandstone rock was broken off, along the pillars almost as square, as if it had been sawed. The strength of this rock was no doubt the cause of the extensive cave. The roof had broken away, at some weak point, and extended into the hard

rock where it could not break off in a small space and so it came over a large area, crushing out pillars and everything in its way in an instant, after it got a fair start. When I went into the mine about 6 o'clock in the morning I heard no indications of a squeeze or fall of roof until the sudden crash came. /This accident having occurred fifty-three and one-half years ago it is not likely that many now live, who were in the mine at the time, and I am often asked to have the account of the accident published in the papers, so that an account of it may be preserved, from one, who was in the mine at the time, of the fall, which entombed so many men, and cast a gloom over the whole community, as well, as the families with which they were connected. / The company through their officers, superintendents, foremen, and workmen, did everything that could be done, to find the bodies of those entombed, and they were successful in getting the bodies of eight out of the fourteen. The others were at too great a distance into the fall, and their scattered conditions so uncertain, that after about six weeks search for them, they gave up in despair of reaching any more of them./ This being about the first cave, of such extent and loss of life, in the coal mines of Pennsylvania, it cast a gloom over the whole country." (Carbondale Leader, September 22, 1899, p. 2)

## One Hero, Many Non-Heroes:

From the initial account of the 1846 mine cave-in that was published in the January 16, 1846 Carbondale Democrat, we learn that Dennis Farrell was nearly killed in the initial fall by coal and stones falling upon him. To relieve him, his brother, John Farrell, ran to get an iron bar, and was never seen again. When Alexander Bryden, at the head of a rescue party, entered the mine and located 18 men in a gallery or heading about a mile from the mouth of the mine, he learned from them that Dennis Farrell, badly wounded, lay at the face of the chamber four for five hundred feet off in the most dangerous part of the fall. Farrell, wholly disabled by a spinal injury and unable to walk, had been liberated by two of the 18 men from the stones and coal that had fallen on him, and then placed against the side of the mine by the two men who removed the stones and coal upon him. Those two men, together with the other 16, then "ran for their lives, from under the falling mass." In the account by the Honorable Henry S. Randall (as reported in the obituary of Alexander Bryden) of Bryden's behavior during the rescue efforts following the cave-in, we learn that when Bryden learned, from the 18 men in the gallery about a mile from the mouth of the mine where he located them, that they had abandoned Dennis Farrell to die and ran for their lives, he, Alexander Bryden, then asked if any of the 18 would go back with him to rescue Farrell. Not one of the 18 nor any among those who came in with Bryden during the rescue efforts came forward. Bryden, "with a word of indignant censure to the men for not bearing their wounded comarade with themselves to the gallery where he found them, . . pointed out their path, bade them escape, and then turning back, entered a path more perilous and difficult than his preceding one." Bryden then went in the additional four or five hundred feet and rescued Dennis Farrell and literally carried and dragged Farrell to a point where the others

could come to his assistance. The others then carried Farrell out upon a board, about a mile and a quarter, to daylight, and from thence to his home. The fortitude, courage, and heroism of Alexander Bryden can not be praised enough. As for the behavior of the 18 men who abandoned their comrade, Dennis Farrell, to die and then ran for their lives, "a word of indignant censure" (such as they received from Alexander Bryden at the time) hardly seems sufficient.

#### More on the non-heroes:

Miller and Sharpless, pp. 132-33: "Despite their independence, miners were noted for their group solidarity. Highly individualistic though they might be, the working conditions in the mines forced them into close dependency on each other. They had to cooperate under dangerous circumstances. And miners expressed their solidarity in various ways. If a miner was injured, his friends took up a collection for him, sometimes even among workers on another shift. Occasionally when a miner was badly injured the other workers walked off the job in protest or simply in sympathy for the injured man. According to one of the most noble traditions, miners immediately volunteered for rescue operations, no matter how hazardous they might be. A miner who was trapped expected others to rush to his rescue and to persist until all hope was lost; he knew that others expected the same from him as well. For miners who did not conform to these unwritten rules working conditions could be made intolerable. Such men were given the silent treatment or, worse, found themselves without help when they needed it." (quoted from Alvin W. Gouldner, Patterns of Industrial Bureaucracy, 1954, p. 129)

#### 10. Fourteen Killed:

Six bodies found and buried, five of which were identified: Patrick Walker, Mark Brennan, Patrick Mitchell, William Clines, and unidentified remains of a fifth miner--all Irish and all Roman Catholic, all buried in the Old Catholic Cemetery, later moved to the New Catholic Cemetery. Ebenezer Williams--Welsh, protestant; buried in Maplewood Cemetery.

(Patrick Walker and Mark Brennan found: see January 30, 1846 issue of *Carbondale Democrat*; Patrick Mitchell, William Clines and Ebenezer Williams found, see February 6, 1846 issue of *Carbondale Democrat*)

Mark Brennan was the great grandfather of Mrs. Patricia Brennan Cobb, living on South Church Street in Carbondale in 2003.

Eight bodies never found: Patrick Leonard, Henry ("Harry") Moore, James Magrath, John Brennan, Peter Crowley (possibly "Crawley"), Anthony Walsh, Michael Toolan (possibly "Tolan"), Herny Devanney (possibly "Devany"), John Farrell: these eight were all Irish and all Roman Catholic.

When the Old Catholic Cemetery (Belmont Street) was closed and the bodies interred therein removed to the New Catholic Cemetery (Russell Park), a large monument, surrounded by 13 individual stones, in memory of the 13 Roman Catholic miners killed in this 1846 cave-in, were placed in the New Catholic Cemetery. It is known for certain that the earthly remains of Ebenezer Williams were interred in Maplewood Cemetery, Carbondale, although a tombstone (if there is one) has not yet been located.

See also, two disturbingly non-ecumenical, melodramatic, and less than historically accurate articles, both by Robert A. Hecht, that were published in the *Carbondale News* in 2003: "St. Rose Cemetery marks local mine disaster in 1846" (September 3, 2003) and "Mine monument will be relocated to original site; personal stories recalled of 1846 mine collapse" (October 8, 2003).

Patrick Clark, a driver, very badly injured, died the following day, January 13, 1846

Hugh Fitzpatrick and John M'Kale: thrown violently against the cars; broken bones; not mortally injured

John Hosie: trapped in mines for two days; got out alive

Dennis Farrell: very badly injured; rescued by Alexander Bryden

Roderick Phillips: trapped in mine for 24 hours; rescued by Alexander Bryden, Phillips "died suddenly of heart failure some time afterwards the cause of which was attributed to his uncomfortable confinement in the mine."

See herein also "Mine fire in 1892 at Old No. 1 Shaft"]

Also: clipping in Gritman scrapbook, dated Saturday, January 4, 1896:

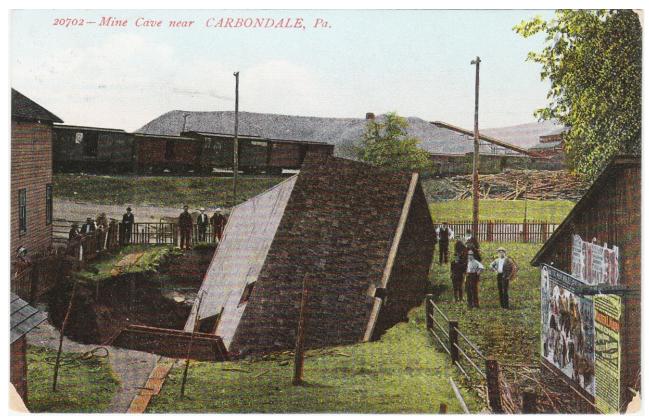
"50 YEARS AGO. / An Extensive Cave-In That Occurred in This City. / Sixteen Mine Workers Lost Their Lives in the Fall of Earth and Rock. / Probably one of the most interesting and engaging persons in our city today is Michael Boland, an aged and respected citizen who lives in the neighborhood of Brooklyn street. Doubtless there are some other persons in Carbondale who will remember the terrible mine fatality which occurred at Hosie mines in the neighborhood No. 1 slope on Monday, January 6, 1846,--just fifty years ago next Monday. / A

LEADER reporter yesterday interviewed Mr. Boland and was told a story which was every entertaining, yet filled with horror. The result of that fateful day brought suffering and desolation to many homes whose loved ones fell victims to the extensive cave-in. / When Mr. Boland was asked by the newsgatherer whether he remembered the occurrence he replied: 'I do, and very well, sir,' and continuing told the following story: 'It was Monday morning about nine o'clock, just fifty years ago this coming Monday, when sixteen employes of the Hosie mine gave up their lives without a moment's notice. The men went to their work that morning in their usual good spirits and when the fall came it was so sudden and unexpected that it caused the wildest terror and excitement. / 'The fall of earth and rock was one of the largest ever known and covered a territory of nearly half a mile square. / 'The settling of the earth shook the whole mine and large pieces of rock and coal fell from all sides. The wind caused by the fall extinguished our lamps and left us all in darkness and there was a horrible stampede of humanity for a place of safety. Frantic men rushed to and fro striking against each other in their mad efforts to get out to the light of day. Some of the men had their clothes nearly torn from them and many of them were injured by running against obstructions and the sides of the mine. / 'The cries of men who were pinned to the earth were heard but their piteous pleadings for help were passed by apparently unheard, so anxious was each to save his own life.' / 'Do you remember the names of the miners who were the victims?' asked the reporter. 'Yes,' said Mr. Boland; 'There was Harry Moore, Peter Crawley, Patrick Leonard, Ebenezer Williams, Patrick Clark, Michel Toolan, John Farrell, two miners named McGrath and Brennan, and a laborer whose name could not be learned; a prop boy named Patrick Walker, and five other laborers whose names never were known. The latter five men had just come to work that morning and their names had not yet been entered upon the time books of the company. / 'One of the miners named Dennis Farrell was caught by a large piece of rock falling upon both of his legs His brother John who was working with him had been thrown down and rendered partially unconscious. When he recovered his senses he at once set about to relieve his brother. He groped about the mine for a bar, hoping that he might raise the rock. When but a few away from his brother a portion of the roof fell upon him and killed him instantly When the body was recovered some days later he was found with the bar clutched in his hands. Farrell was afterward released by a man named Bryden. / 'In the meantime,' continued Mr. Boland, 'most of the men had succeeded in getting out of the mine, myself included, and the news of that terrible cave in was spread and was soon known for miles around, mothers, wives, sisters, brothers, children and friends soon flocked to the mine and the scene was one which I shall never forget. / 'The cries of the women whose loved ones had fallen victims was heart rending and their sufferings would wring the stoutest heart. The officials of the mines soon had gangs of men at work clearing away the mass of earth, in hopes that some lives might be saved. / 'Searching parties were organized and I was one of a party who went into the mine in the hope that we might find some men who had lost their bearings. John Hosie was one of the missing ones and we knew that he was not under the fall. On the following Wednesday we found the following inscription upon a mine rail written with chalk: John Hosie is alive, in want of oil, no light. / 'Soon after that we heard a shout and a little later we found Hosie nearly exhausted by the

efforts he had made to reach the outside. He had with him a dinner pail filled with edibles, but so confused was he that he had not eaten anything. When he was taken to the mouth of the mine he fainted. / 'He was removed to his home and doctors Rafferty and Dixon, the practicing physicians in Carbondale, were called to attend him. In the meantime, knowing that the men were all dead, a coffin was made for each one of them and as an arm or some portion of a body was reached, the alarm was given and the body removed. The only possible way we could identify the men was by having; the women who lost loved ones identify them by their clothes or some mark known only to them. / 'When the boy Patrick Walker was reached he was found in a crevice but was not under the fall although he had been injured. When the searchers found him he was in a sitting position, with his hands clasped above his head, and he evidently died of starvation or fright, or was suffocated. / 'How many bodies of the victims were recovered? Asked the reporter. / 'Eight,' replied Mr. Boland. 'The others are today where the fall occurred. As soon as they were found they were buried in the old Catholic graveyard where the parochial residence now stands. Ebenezer Williams, a Welshman, was buried in the Protestant cemetery. / Mr. Boland cited other instances connected with the catastrophe, all of which are entertaining but time will not permit us to mention them. The reporter found Mr. Boland a ready talker and extremely courteous. He is one of Carbondale's most esteemed citizens and although somewhat advanced in years, he is at present enjoying the best of health and has bright prospects to live many years, to enjoy the proceeds of years of industry and toil. / Among some of our oldest residents who doubtless remember the occurrence are John Lacken of Brooklyn street and Anthony Scott of Fallbrook street but the majority of persons who worked in the mine at that time have passed away."

(end of 1846 mine disaster material)

Post card in the collection of the Carbondale D&H Transportation Museum:



"Mine Cave near CARBONDALE, Pa."

On Saturday, September 15, 1849, Michael Horan, an Irish miner, was instantly killed in the mines, leaving a family nearly distracted at their sad and sudden bereavement. Here is the account of the accident that was published in *The Lackawanna Citizen*, and Carbondale Democrat on Friday, September 21, 1849:

"MELANCHOLY ACCIDENT!--On Saturday morning of last week *Mr. Michael Horan*, a miner, was instantly killed in the mines at this place. He was an Irishman, much respected for industry, intelligence, and sobriety and leaves a family nearly distracted at their sad and sudden bereavement." (*The Lackawanna Citizen, and Carbondale Democrat*, Friday, September 21, 1849, p. 2)

On Friday, August 2, 1850, the roof of one of the chambers in the mines, in length about 30 feet by 20 feet, fell on some workmen while they were engaged in securing it, crushing them beneath

it. Four men were seriously injured, one, a man named Flynn, possibly fatally. Here is the account of the accident that was published in *The Lackawanna Citizen*, and Carbondale Democrat on Friday, August 9, 1850:

"Accident in the Mines. / A melancholy accident occurred in the mines in our village on Friday last. The roof of one of the chambers, in length about 30 feet by 20 in width fell suddenly upon some workmen while they were engaged in securing it crushing them beneath it. The thickness being only about 6 inches they were got out alive, though much hurt. Four were injured, two men by the name of Haley, one of Burke, one of Flynn. At the time of writing this they are all living but the life of Mr. Flynn is nearly despaired of." (*The Lackawanna Citizen, and Carbondale Democrat*, Friday, August 9, 1850, p. 2)

In the *Carbondale Transcript, and Lackawanna Journal* of March 26, 1857, it was announced that, following a work stoppage, the Delaware and Hudson Company would again begin mining and transporting coal over their railroad on April 1, and that the D&H planned to work their road to its utmost capacity during the present season. In that issue of that paper, we read:

"GOOD NEWS!—The Del. & Hudson Company will commence mining and transporting coal over their Railroad on Wednesday next. This is the best news we have heard in a long time; already we observe, in the notes of preparation, a change has come over the countenances of our miners and laborers—their step is more elastic, and golden hopes are opening up to them. We understand the Company will work their Road the present season to its utmost capacity." (The Carbondale Transcript, and Lackawanna Journal, March 26, 1857, p. 2)

On August 20, 1858, at Archbald, David Jones, a miner, was badly injured when the roof of a coal mine fell upon him. Here is the report on the accident that was published in the *Carbondale Advance* of August 21, 1858:

"Accident at Archbald. / David Jones, a miner at Archbald, was badly injured by the falling of the roof upon him at 2 o'clock yesterday afternoon. He survived but 4 or 5 hours." (Carbondale Advance, August 21, 1858, p. 3)

On July 19, 1860, a month-long strike by the miners came to an end. In a well-reasoned notice that was published in the *Carbondale Leader* of July 21, 1860, the point is clearly made that it is foolish and absurd on the part of employees to attempt to dictate terms, by means of strikes, to a powerful corporation such as the Delaware and Hudson Canal Company. Here is that notice:

"The Strike. / We are happy to announce a termination of 'the Strike,' and a resumption of business on Thursday last at the mines here. We hope it will be a long time before it is again disturbed. / During the existence of 'the strike,' we refrained carefully from any interference in what was others' business, not ours, believing the effect might be mischievous, and at least in the then excited state of feeling would be of no advantage. It is now passed, and we hear but one opinion expressive of its effects, all argue that they are deplorably evil. All parties have suffered loss. The men have lost a month's wages; the Company the result of a month's business; and the non-participants, our Merchants, Mechanics, and the community generally have suffered in the aggregate to the amount at least of \$30,000. / If any argument were needed to convince sensible men of the folly and absurdity of such attempts on the part of employees to dictate terms, by strikes, to a powerful corporation, such as the Del. & Hud. Canal Company, such argument is abundantly furnished to those who have watched the course of events in our midst for the past few years. We venture to assert that even when a fancied concession has been obtained from the Company by any class of men in their employment while upon a 'strike,' (and we have yet to learn that any material concession has ever yet been made by them under such circumstances,) there has never been a single instance when the men engaged in such strike have gained an advantage sufficient to compensate them for their loss of time in their voluntarily abstaining from work. / In the present instance we learn that not a single point has been gained. On the contrary, while the rates of wages remain precisely as they were before the strike, besides the loss of a month's wages, the long suspension of business at this point has made it necessary, as we understand, for the Company to curtail operations *permanently* to some extent upon the Canal, so that probably the same number of men as heretofore will not be required during the remainder of the season for the mining and delivery of their coal at Carbondale. This will necessarily throw out of employment many who had otherwise secured for themselves and families a comfortable support for the season. / Whatever may have been the fancied result of strikes heretofore, the position now taken by the Company shows most unmistakeably what are their intentions for the time to come; and it is to be hoped that the folly of a few men will not again be permitted to overrule the better judgment of our mining and laboring population, and induce them to place themselves in the false position they have occupied for the past month. We hold that 'the laborer is worthy of his hire,' and the higher the wages he receives the better we are pleased. But the desirable end, his own interest, is defeated by 'strikes,' as we have shown, and the principle, also, is wrong. Contracts for labor must be voluntary, under our laws and free system of government, on both sides. In this case, as one in point, the Company on their side have a right to offer what wages they choose, and the employee on his a right to accept it or reject it, to labor for it or not, as he chooses. If not, there is no contract, both are free--the laborer to seek other employment, and the Company to seek other laborers, and neither has the right, either natural, moral or legal, to interfere farther with the other in so doing. / But in a 'strike' this principle is overlooked, and the employee undertakes to make not only his side of the bargain, but the Company's also, and to compel a compliance with his demands by preventing others taking his place. This is a wrong, and the effects are all injurious and evil to both parties. / We have estimated the loss to our town, and in which we have all shared, by the late strike, at

\$30,000. Many of our neighbors place it much higher. Laborers and Boatmen on the other side of the mountain have lost at least an equal amount. It is all loss, on all sides, and no gain. Hence it is that we would do what we can to avoid a repetition of the evil." (*Carbondale Leader*, July 21, 1860, p. 2)

In an article in the *N. Y. Courier & Enquirer*, published in early January 1860, the highs and lows of stock prices of the Pennsylvania Coal Company and the Delaware and Hudson Canal Company were presented and the operations and policies of both companies compared. In the *Carbondale Advance* of January 14, 1860, there is a commentary on that article, as follows:

"The N. Y. Courier & Enquirer, in its review of Companies and Stocks, last week, has the following in regard to two of our leading companies in this region: / THE PENNSYLVANIA COAL COMPANY has been managed during the past year with the energy and skill which have always characterized its history. Recognizing the fact that the march of improvement has opened new channels by which consumers could obtain supplies, and conforming with alacrity to the new position, which this state of things involved, the directors have secured a liberal portion of the year's business by 'quick sales and small profits.' As a consequence of this enlightened policy, the market price of the Stock has undergone but slight variation, and is regarded as one of the best companies of the class to which it belongs. / THE DELAWARE AND HUDSON CANAL COMPANY have begun slowly to recognize the facts to which we refer in speaking of the Pennsylvania Coal Company. Heretofore this company has occupied a position which enabled its managers to assume some degree of indifference towards its dealers, but competition has made it necessary for them to seek to extend their business rather than to await its growth. The possession of the Canal is an advantage which has encouraged the inertia they have hitherto indulged, but the policy of activity and a conforming to the altered state of trade which they have manifested the past season, augur well for the future. The Stock has fluctuated considerably, owing to the persistent opposition to every advance which 'bear' operations have made. Meantime the Company have divided seven per cent. to their shareholders in the year just closed, and have a prospect of larger dividends in the coming year. / It also gives the highest and lowest prices of the stock of each company since July last, as follows: --Delaware & Hudson, July, lowest 88 ½, highest 90 ½. December, lowest 94, highest 99 ½. / -- Pennsylvania Coal Co., July, lowest 83 ¼, highest 85 ½. December, lowest 82, highest 83 ½" (Carbondale Advance, January 14, 1860, p. 2)

In the September 21, 1861 issue of the *Carbondale Advance*, it was announced that the mines, railroad, and shops of the Delaware and Hudson Canal Company would run only five days a week and that there would be some reductions in wages. Here is that announcement:

**"Five Days.**—The Mines, Railroad and Shops of the Del. & Hud. C. Co. are now run only *five days* in the week.—There has also been some reduction in wages. With this reduction both in time and wages, we are still better off here than in any other place with which we are acquainted. In most places, the reduction is still greater, or business entirely suspended. We hope earnestly that business may be kept up to its present pitch here." (*Carbondale Advance*, September 21, 1861, p. 2)

The shipment tonnages of anthracite coal over the D&H Gravity Railroad from Carbondale to Honesdale by the D&H and ten other companies for 1860 are reported in the following notice that was published in the *Carbondale Advance* on January 5, 1861, p. 2):

"S. S. Benedict Esq:--The following are the shipments of coal to Honesdale, on the Rail Road of the Delaware and Hudson Canal Co., for the year 1860. /

| From Mines of the Co.,          | 290,356,18 [tons] |  |
|---------------------------------|-------------------|--|
| From Mines of Eaton & Co.,      | 72,290,09         |  |
| From Mines of Jones & Co.,      | 60,780,11         |  |
| From Mines of Richmond & Co.,   | 20,894,11         |  |
| From Mines of Hosie & Co.,      | 10,053,19         |  |
| From Mines of Birdseye,         | 10,843,00         |  |
| From Mines of No. 5 Archbald    | 11,268,00         |  |
| From Mines of Chittenden,       | 12,916,19         |  |
| From Mines of Offerman & Co.    | 8,859,08          |  |
| From Mines of Brennan,          | 4,951,11          |  |
| From Mines of Vanstorch, (A. E. |                   |  |
| Albright)                       | 17,274,18         |  |

### THOMAS DICKSON

Supt. Coal Dep't,

Total Tons.

Carbondale, Dec. 27, '60

526,480,04

In 1861-1862, James Hosie, Superintendent of the D&H mines, leased, for a term of years, the Brennan Mines, just north of Carbondale, and the Bridseye Mines, Archbald. That we know from the following notice that was published in the *Carbondale Advance* of January 18, 1862:

"We learn that JAMES HOSIE ESQ., for several years Superintendent of the Company's Mines at this place, has leased the Brennan Mines above town, for a term of years. This is in addition to his lease of the Birdseye Mines at Archbald, which he worked last year. Mr. Hosie has the advantage of a thorough practical knowledge of all the details of the business." (*Carbondale Advance*, January 18, 1862, p.2)

The shipment tonnages of anthracite coal over the D&H Gravity Railroad from Carbondale to Honesdale by the D&H and several other sources/companies for 1861 are reported in the following notice that was published in the *Carbondale Advance* on January 4, 1862, p. 2):

"Scranton, Jan. 2, 1862. / S. S. BENEDICT--*Dear Sir:* Below find the amount of Coal mined and forwarded on the Railroad of the Del. & Hud. Canal Co., for the year 1861, with the sources from which it was received:

| From Mines of the Company,                 | 204,398 14 Tons         |
|--|-------------------------|
| From Mines of Brennan,                     | 28,809 04               |
| From Mines of Offerman & Co                | 52,625 10               |
| From Mines of Eaton & Co.,                 | 103,154 03              |
| From Mines of Birdseye & Hosie,            | 57,009 18               |
| From Mines of Jones & Co.,                 | 117,309 09              |
| From Mines of Chittenden,                  | 18,098 18               |
| From Mines of Richmond & Co.,              | 58,856 06               |
| From Mines of Vanstorch, (A. E. Albright,) | 82,896 10<br>762,688 12 |
| Add mined at Carbondale for Local Sales, _ | 8,267                   |
| Total,                                     | 770,955 12 Tons         |
|  |                         |

Yours Truly, THOS. DICKSON, Sup't. On Tuesday, August 11, 1863, Dominick Cooney, an old resident and miner from Carbondale, was killed by an accident among the coal cars. On that same day, John Healey, a recent arrival in Carbondale from Ireland, who began work in America on Tuesday, August 11, was sun struck on August 11, and died. In the *Carbondale Advance* of August 15, 1863, we read:

"Mr. DOMINICK COONEY, an old resident and miner in our city, was killed suddenly here on Tuesday, by an accident among the coal cars. He was generally respected, and his remains were followed to the Cemetery by a procession of several hundred of his neighbors and friends. / On the same day, a young man named JOHN HEALEY was *sun-struck* here so as to cause his death. He had recently arrived here from Ireland, and commenced work in America that morning." (*Carbondale Advance*, August 15, 1863, p. 2)

On Tuesday, February 23, 1864, work in the mines in Carbondale was resumed. Work was not resumed by the miners at Archbald, Olyphant and Dickson, in the employ of contractors that furnish coal at those points to the Company. In the *Carbondale Advance* of February 27, 1864, we read:

"WORK RESUMED--Mining was resumed here on Tuesday last. The Miners at Archbald, Olyphant and Dickson, in the employ of contractors that furnish coal at those points to the Company, are still idle." (*Carbondale Advance*, February 27, 1864, p. 2)

Those miners at Archbald, Olyphant, and Dickson that were not working in February 1864, were back to work by the end of March 1864. As such, we read in the *Carbondale Advance* of March 26, 1864, "This will place matters upon a prosperous business footing along the whole line of the Del. & Hud. C. Co.'s Railroad.":

"Resuming Business. / We learn that Mining will be resumed at Archbald, Olyphant and Dickson on Monday next. This will place matters upon a prosperous business footing along the whole line of the Del. & Hud. C. Co.'s Railroad." (*Carbondale Advance*, March 26, 1864, p. 2)

James Hosie, formerly Superintendent of the D&H Mines, and in Civil War service as Department Provost in February 1865, was killed in cold blood by a gunshot on February 13 by a deserter from Newton Township by the name of Smith. The following account of this vicious murder was published in the *Carbondale Advance* of February 18, 1865, p. 2:

"Tragic Death of James Hosie, Esq. / We are pained to learn that Dept. Provost Marshal Hosie was shot while executing the duties of his office, in Newton township, in this county, on Monday

afternoon of this week, about 3 o'clock. He was removed to Providence Borough about six miles, and lingered until Tuesday afternoon at 5 o'clock when he died. / We have not the particulars fully and positively. But the facts seem from reports to have been about as follows: He went on Monday with one or more assistants, to Newton township, to arrest a man by the name of Smith—a deserter. Calling at the house he was told that Smith was upstairs. He advanced to the foot of the stairs. Smith fired upon him from the head of the stairs, the ball entering his face below the eye and passing through lodged in the neck. / He rode to Providence, and after arriving at the Hotel there was able with some assistance, to walk upstairs to the parlor. A soldier with him is said to have been also shot on the same occasion, but not dangerously. / Mr. Hosie has been until recently a resident here, and was for many years Superintendent of the Company's Mines. He since leased Mines at Archbald, and the Brennan Mines above town for a time, until entering the military service as Dept. Provost Marshal. / The Funeral services will we learn be held to-day, and his remains be taken to Pittston for interment. / The resolutions of the Masonic Lodge, of which he was a member, will be found in another column. (Carbondale Advance, February 18, 1865, p. 2)

Coal shipments by the D&H for 1865 were down by almost ninety thousand tons from 1864. In the *Carbondale Advance* of December 23, 1865, we read:

"It will be seen by statement in another column that the shipment of coal by the Del. & Hud. C. Co., falls but 89,514 tons short of last year, notwithstanding the ten weeks' strike." (*Carbondale Advance*, Saturday, December 23, 1865, p. 2)

In the fourth week of December 1865, the D&H mines and railroad were still in brisk operation, even though the Canal closed during the third week of the month:

"The Delaware & Hudson Canal closed with last week. The Mines and Railroad are still in brisk operation." (*Carbondale Advance*, Saturday, December 23, 1865, p. 2)

On July 15, 1865, the D&H miners went on strike and mining was suspended for seven days.

More coal was mined and shipped to market in 1866 by the D&H than in any other year up to that time, 1,362,000 long tons of 2240 pounds. In the *Carbondale Advance*, Saturday, December 8, 1866, p. 2, we read:

"A MAMMOTH BUSINESS.--The coal mined and transported to market the present season by the Del. & Hudson Canal Co., exceeds that of any previous year. On the first of this month the

amount was reported at 1,362,000 tons, and to the close of the season the amount mined will fall very little short of 1,400,000 tons. We believe too that these reports are upon a basis of *long* tons of 2240 lbs., which if reduced to tons of 2,000 lbs., by which most other companies estimate production, would make the aggregate amount mined nearly 1,560,000 tons. We think this amount is larger than any single company in Pennsylvania has ever produced in one season. It is conclusive evidence of the energy and ability of Superintendents Dickson, Manville and Weston. We are told that a still larger business may be expected next season." (*Carbondale Advance*, Saturday, December 8, 1866, p. 2)

The following statement of coal mined and forwarded by the Delaware and Hudson Canal Company for the year ending December 10, 1867, was published in the *Carbondale Advance* of December 21, 1867, p. 3:

### "DELAWARE AND HUDSON CANAL COMPANY.

# OFICE COAL DEPARTMENT.

Providence, Pa., 10<sup>th</sup> Dec. 1867

Statements of Coal mined and forwarded by D. & H. C. Co., for the year ending December 9<sup>th</sup>, 1867, with sources whence received.

| Carbondale | Coal Brook,    | 89,394.08  |            |
|------------|----------------|------------|------------|
|            | Slope,         | 36,211.14  |            |
|            | No. 1 Shaft,   | 66,866.03  |            |
|            | No. 3 Shaft,   | 43,130.02  |            |
|            | Racket Brook,  | 144,357.16 | 379,960.08 |
| Rushdale,  | J. Jermyn,     |            | 129,029.02 |
| Archbald,  | Eaton & Co.    | 144,034.11 |            |
|            | Boston & Lack. | 90,180.18  | 234,215.09 |
|            |                |            |            |

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| Olyphant,  | Grassy Island,     | 97,280.09  |              |
|------------|--------------------|------------|--------------|
|            | Olyphant, No. 1,   | 98,640.09  |              |
|            | Olyphant, No. 2,   | 103,056.15 |              |
|            | Olyphant, No. 3,   | 122,578.00 | 421,555.15   |
|            |                    |            |              |
| D. 1       |                    |            | <0.007.07    |
| Dickson    | Elk Hill Coal Co., |            | 60,987.07    |
| Providence | Legitts Creek,     | 76,050.07  |              |
|            | Von Storch,        | 161,669.19 | 237,720.06   |
|            |                    |            |              |
| Mill Creek | Union C. Co.,      |            | 44,608.17    |
|            | Total for 1867,    |            | 1,507,486.17 |
|            | Total for 1866,    |            | 1,391,674.07 |
|            | Increase,          |            | 115,812.10   |

E. W. WESTON, Supt.

(Carbondale Advance, December 21, 1867, p. 3)

The amount of coal mined and forwarded to market by the D&H in 1868 was the largest amount, (1,840,681 tons of 2,240 pounds) ever produced by any company in this country in a single year. That remarkable fact is presented in an article that was published in the *Carbondale Advance*, Saturday, February 6, 1869, p. 3:

"The Coal Trade for 1868. / The review of the reports of coal mined and transported during the past year, by the leading companies of this section shows the operation of the Delaware & Hudson Canal Co. to have been by far the largest of any of the number. Indeed the amount of coal mined and forwarded by them [the D&H] is decidedly the largest ever produced by any company in this country in a single year [emphasis added]. By a statement given above it will be seen that the shipments for the year ending Dec. 10, 1868 were 1,840,681 tons of 2,240 pounds, or 2,061,563 tons of 2,000 pounds! Of this amount 3318,300 tons were mined in the Wyoming Valley from the Baltimore Coal & Union R. R. Companies mines of which, the Delaware & Hudson Co. are lessees. / The Delaware, Lackawanna & Western R. R. Company ranks second; their tonnage for the year ending, January 4, 1869 having been 1,728,785 net tons. / The amount mined and forwarded by the Pennsylvania Coal company for the year ending Dec. 12, 1868, was 911,836 tons of 2000 pounds. / The total production of these three companies during the past year, therefore reached 4,702,183 tons." (Carbondale Advance, Saturday, February 6, 1869, p. 3)

## September 6, 1869, the Avondale Mine Disaster

See the comprehensive account of that tragedy in Volume XIII in this D&H series. See also "Additions for Volume XIII" in the present volume.

On September 18, 1869, the *Carbondale Advance* published the account given below of the greatest mine disasters on record. Here is that account:

"WHAT A RECORD! The following is a list of the greatest mine disasters on record: 14 killed at Carbondale, Pa, by caving in of 40 acres of mine, in 1844 [should read "1846"]. Five bodies were never recovered. One man was two days in the mine; 209 at Hartley colliery, England, in 1862; 357 at the Oaks, in 1868; 13 at Diamond mine disaster, Scranton, Pa., March 31<sup>st</sup>, 1868; 53 at Ferndale colliery, Wales, June 10, 1868; 53 at St. Helen's colliery, July 1868; 50 at colliery explosion, Jemappes, Belgium, Aug. 10, 1868; 28 at Lancashire, England, 1868; 321 at mine near Dresden, Saxony, Aug. 28<sup>th</sup>, 1869; 110 lose lives at Avondale, Pa., Sept. 6, 1869." (*Carbondale Advance*, September 18, 1869, p. 3)

To that list, we make the following additions:

1871: West Pittston shaft burns; 25 were killed

1873: Explosion in the Eagle shaft, Pittston; 20 were burned

1885: December 11: Nanticoke; 26 instantly killed

1890: February 1: Nottingham mine, explosion of black damp, six men killed

1894: February: 13 miners killed in a squeeze in the Gaylord mine, Plymouth

1896: Pittston Mine Catastrophe, June 28, 1896, 3 A.M.

Catastrophe took place at the Twin Shaft of the Newton Coal Company at Pittston Junction, only a few feet away from the DL&W depot and from where the Pittston street car stops at the terminus of the route. More than 80 miners entombed. Citizens of the two Pittstons heard three distinct and separate shocks accompanied by rumblings resembling earthquake disturbances. Part of the mine (the rock between the fifth and sixth veins) had been 'working' for some days and a body of men, estimated at from 65 to 135 went down to timber and endeavor to prevent a cave-in of the workings. A cave-in, about 1,800 feet from the foot of the shaft, along a slope which travels off from the main gangway, at a point under the flats a little east of Coxton yards and covering an estimated area of ten or twelve acres, took place. About 5,000 people gathered about the mine during the afternoon.

A series of articles about that Pittston cave-in was published in the *Carbondale Leader*, and copies of those articles were clipped out by the Gritmans and included in one of their scrapbooks (now in the collection of the Carbondale Historical Society). From one of those articles, we learn that Carbondale Mayor James J. O'Neill issued a call for aid from the people of Carbondale for the widows and orphans of the victims of the Pittston disaster. Here is that article from the August 24, 1896 issue of the *Carbondale Leader:* 

"\$1,386.90. / Total Amount to Date Subscribed In This City to the Pittston Relief Fund. / The subscriptions by the miners and laborers at No. 1 mine on the south side to the fund in aid of the sufferers by the Pittston mine disaster have been handed in to the First National bank [one of the two designated recipients of donations; the other the Miners and Mechanics' Savings Bank]. They bring the total of subscriptions from this city up to \$1386.90. / Previously acknowledged \$1,260.90 / Employes No. 1 tunnel \$102.50 / [\$1 from each of the following] Patrick Linnen, Frank Larkin, Patrick Clifford, Michael McGowan, Thomas Mullen, Patrick Atkinson, John McDonough, and Thomas Linnen. / [50 cents from each of the following] Thomas Duffy, Bernard Keogh, Frank Clifford, James Duggan, Dominick Killeen, John Cook, John Barrett, John May, John Finnegan, John Sullivan, William Casey, John Carew, John Kane, Barney Grier, Daniel Grady, Michael Tool, James Mason, Thomas Clifford, William O'Malley, John Toolan, Frank Lavelle, William McGarvey, Michael McGowan, and John Donnelly. / [25 cents from each of the following] Joseph Carew, John McKenna, Edward Linnen, Sylvester McGarry, John Tool, Thomas Barrett, Thomas Loftus, Peter Kerins, Johnny Burke, Patrick Eagan, Thomas Murray, Patrick McGowan, John Quinn and Edward Hope." (clipping in Gritman scrapbook dated August 24, 1896)

Here is that series of articles about the Pittston catastrophe that is included in one of the Gritman scrapbooks:

# PITTSTON'S MINE GATASTRO

## MORE THAN 80 MINERS ENTOMBED

JUNE 29, 1896.

## NO HOPE FOR THE MEN.

POSSIBILITY OF BRINGING ANY OF THEM TO THE SURFACE ALIVE IS VERY THREE HUNDRED MEN ARE ENGAGED IN THE WORK OF SECURING THE MINE SO THAT THE AF-FECTED PORTION CAN BE REACHED -- NAMES OF THE DEAD MEN SO FAR AS COULD BE ASCERTAINED-SCENES ABOUT THE SHAFT.

A horrible story of the mines must be old this afternoon. It is a story that momises to have no equal in the history

TA horrible story of the mines must be told this afternoon. It is a story that promises to have no equal in the history of mining in the anthracite coal regions. It is at any rate the most terrible disaster that has occurred since the memorable explosion at the Avondale, near Plymouth, in September. 1868, when 108 men were killed by the explosion and one of the party of rescuers met death by falling down the shaft.

The disaster yesterday morning at 3 o'clock occurred at the Twin shaft of the Newton Coal company at Pittston Junction, only a few feet from the Delaware, Lackawanna & Western depot and from where the Pittston street car stops at the terminus of its route. Part of the mine had been "working" for some days and a body of men, estimated at from 65 to 135, in charge of superintendents Langan and Lynott, the former the deputy mayor of Pittston, went down to timber and endeavor to prevent a cave in of the workings. The men were busy setting the timbers when an extensive cave in occurred, estimated at six or seven acres, and the men were caught in the midst of it. All day and all night relays were at work endeavoring to reach the men, but at every point they were met with the fall and they could get no nearer than within about 800 feet of the place where the men are. The work of timbering and clearing the cave was kept up all day, but little progress could of necessity be made, and it was not supposed by the most experienced miners that they could be reached earlier than three or four days, and some even went so far as to say that the men could not be reached earlier than three or four days, and some even went so far as to say that the men could not be reached earlier than three or four days, and some even went so far as to say that the men could not be reached earlier than three or four days, and some even went so far as to say that the men could not be reached earlier than three or four days, and some even went so far as to say that the men could not be reached earlier than three or four days, and some e

of the area affected, and if all of them or some of them happen to be in a small place that was not filled by the earth, rock and coal they will probably starve to death before help can reach them.

The Wilkes-Barre Record says: At 3 o'clock yesterday morning the premonitory symptons of the disaster were heard in Pittston and the greatest excitement immediately ensued. The citizens were disturbed by three distinct and separate shocks accompanied by runblings resembling earthquake disturbances. They were sufficiently strong to awaken peaceful slumberers throughout the two Pittstons. The alarm was considerably added to by the wild whistle of the Twin Shaft, accompanied by repeated fire alarms from box 17. fire alarms from box 17.

#### A PITIFUL SIGHT.

Hundreds of people apprehending serious results, none too terrible for their excited minds, rushed to the Twin shaft from which the alarm came and found from which the alarm came and found that the shock so distinctively felt was due to an extensive cave-in in the sixth, or lower, vein of that shaft. Rumors gained currency that at least 150 men and boys were incarcerated in this horrible and death dealing area. The or lower, vein of that shaft. Rumors gained currency that at least 150 men and boys were incarcerated in this horrible and death dealing area. The fearful and distressing news spread with lightning rapidity and in a short space of time the head of the shaft was thronged with hundreds of men, women and children, wringing their hands and uttering most heartrending cries for their loved ones imprisoned in the dark pit beneath. The hour following the alarm was one long to be remembered by those witnessing the sight, the anxious suspense of the workmen, the grief of the families and friends and the tender sympathy for the afflicted ones by the spectators requires more than pen to describe. The foreign element in particular in their piercing harangues and their wild demand for their friends gave to the weird and harrowing sight a still more sorrowild enter the stage. and their wild demand for their friends gave to the weird and harrowing sight a still more sorrowful aspect. Efforts were made to quiet the apprehensions of the grief stricken ones by tendering them the little encouragement possible, but unavailing were those efforts put forth, as the mothers, fathers, daughters and sons, sisters and brothers reasonably feared the worst and upon the first information received their fears were found to be well grounded.

THE FIRST OUT OF THE MINE

#### THE FIRST OUT OF THE MINE.

The first to come to the surface after the disaster was John Gill, who was at the disaster was John Gin, who was as the foot engaged in his labor. The force of the concussion threw him with ter-rific force to the wall, and with intense fear, more dead than alive, he crept to the foot and with great difficulty sig-nulled for the surface. When brought carlier than three or four days, and some even went so far as to say that the men could not be reached earlier than a week or two. Everything depends upon the extent of the cave. If the fall is not so extensive beyond where the men are working the imprisoned miners will be reached earlier than if the fall covers up everything and is as extensive at all places of the affected area as at another.

Little hope is held out that the men are alive. The general supposition is that they were caught by the cave and buried, as they were right in the midst. HOW THE CAVE OCCURRED

It appears that several days ago the officials discovered that the rock between the fifth and sixth veins had commenced working and to prevent its con-tinuation on Saturday and Saturday night a number of day men and such night a number of day men and such others as could be pressed into service had been pillaring and propping the sixth vein so as to ensure the satety of the workmen on Monday. Saturday night the regular night force was working at a point about 3,000 feet from the shaft at the foot of No. 3 plane, at a point under the flats a little east of Coxton yards. The force was under the supervision of superintendent M. F. Langan and his assistant, Michael Lynott. Orders had gone forth that about midnight as many as possible should be sent down to assist in this dangerous work as the constant cracking and splintering of the roof gave ample indication that the possibilities of danger were most strongly founded. In accordance with this order between 12 and 1 o'clock on Sunday morning about fifty additional workmen left this home. o'clock on Sunday morning about fifty additional workmen left their homes and journeyed to what seems their end.

The new force of men were placed at a point beyond that of the night hands. The news, as it was brought to the surface by these three men mentioned, who likely will be the only ones to tell the tale of that heart anguishing night, was that all of these 100 men had been caught and either crushed to immediate death or were imprisoned to perish by starvation. Responsive to this discour-aging news the excitement became more demonstrative. It was found that more demonstrative. It was found that all the mine foremen and superintend-ents and bosses, so absorbed were they in the completion of the important work inside, had gone to supervise the work and had suffered with those who were imprisoned.

#### THE WORK OF RELIEF.

THE WORK OF RELIEF.

This gave the work of relief no systematic head and yet nobly, unsacrificingly, possibly to face certain death, the following, providing themselves with safety lamps, hurried to the mission of relief: John Doyle, John Daily, Charles McDonnell and James Leynon.

The mine was still caving, and even at that time the top was caving; near the

The mine was still caving, and even at that time the top was caving in near the foot of the shaft, thereby making it practically impossible to continue labor without propping up the way, as the rescuers went in.

#### A GLOOMY MORNING.

A GLOOMY MORNING.

Daylight soon appeared, and as if nature, too, sorrowed with those upon earth, the rain drops descended and gave a still more gloomy aspect to what was a sight none could see to forget. Mine inspector McDonald, together with W. G. Thomas, having arrived, went to the bottom and made a thorough investigation. He used the knowledge for his twenty-five years' experience, and determined that no rescue could then be made, and in his treport. ence, and determined that no rescue could then be made, and in his treport only confirmed the stories of his pre-decessors in their work of rescue. Mr. McDonald announced that the fan house had suffered no injury, and so far as travel was possible the air cur-rents were perfect.

#### OFFICIALS CONFER.

This fact gave hope to those in control that perhaps a sufficient volume of air could be forced to the rear of the cave in by sending it in a round about way. This apparently was one of the successful efforts of the early morning

The names of those known to be in the mine

but later in the day a consultation was held by leading superintendents of the Lackawanna and Wyoming valleys. At this conference, held about 12 o'clock, this conference, held about 12 o'clock, reports were made by the experienced foremen who had made these rescuing trips, and the work done was most fully endorsed and commended, the opinion being that nothing better could have

been done.

THOSE IN THE MINE.

The following is a list, so far as it could be obtained, of those in the mine. There are a number of others, but no one about the mine knew who they are:

M. J. LANGAN, superintendent, aged about forty-three years. Married and survived by a wife and ten children.

Mr. Langan was serving mayor pro tem. of Pittson, during mayor Maloney's trip to Ireland. He was born in Pittson, and has served the borough as school director and treasurer.

director and treasurer.

M. F. LYNOTT, mine foreman, has a wife and seven children. He had served as a member of Pittston council for several terms, and resided on North Main street

ALEXANDER McCORMICK, chief fire boss, aged 40 years, lived on Union street was serving as a member of Pitts-

ton school board; leaves a wife and nine

children.
THOMAS TENPENNY, assistant fire

on Chapel street.
THOMAS CARDEN, 26 years married, and resides on Panama street, no

children.

JOHN O'BOYLE, wife and two chil-

JOHN O'BOYLE, wife and two children, in Hamtown.
ANTHONY KANE, single, 36 years, living with his parents, on Chapel street.
THOMAS MURPHY, driver boss, widower, living in Oregon.
CORNELIUS MCGUIRE, tracklayer, a wife and four children, living in Oregon.

gon. JOHN McGILL, Cornelly street, wife nd two children.
MICHAEL HUGHES, night fire boss,

MICHAEL HUGHES, night fire boss, a wife and one child, residing in Oregon.

JAMES DALY, footman, single young man, residing on Chapel street.

MICHAEL CONNELL, single, boarding with John Lynott on Chapel street, was formerly of Schuylkill county.

JOHN HART, footman, single, aged 23, only son of Patrick Hart of Chapel street.

street.
MICHAEL GAUGHAN, single, 26

years, living on Cliff street, JAMES WATT, wife and eight child-

THOMAS WATT, son of the former,

24 years.
THOMAS RUANE, single, 28 years.
JOHN KELWE and son FRANK
KELWE, boarded at John Connell's St.

James hotel. EDWARD DELANEY, 38 years. wife and four children, living on Chapel

street.
PETER MARTIN, single, 35 years, boarded at John Connell's St. James

MARTIN GILBRIDE, single, 29 years

old.
DOMINICK DONNELLY, wife and two children, living on Chapel street.
THOMAS BARRETT, single, boarded

at John Connell's.

JOHN GAFFNEY, 22 years, boarded JOHN GAFFNEI, 22 years, boarded at M. Toole's on Chapel street,
THOMAS GAFFNEY, wife and seven children, living on Union street.
PETER JOYCE, brother of C. F.
Joyce, chairman of common council,
Pittston.
PETER KELLY single.

PETER KELLY single.
SYLVESTER A. GERMAN, married,
wife and four children.
PATRICK COSTELLO, single, board-

rather Costello, single, boarded at John Connell's.

T. W. O'BRIEN, 28 years, married, residing on Lambert street.

TIMOTHY DERIG, single, residing with his parents on Center street.

PATRICK RUANE, married, a wife and seven children, residing on North Main street

JAMES BURKE, single, boarder at . Ruane's. MICHAEL BURKE. single living with

his mother on Chapel street.

EDWARD GILDEA. wife and two children, living on North Main street.
THOMAS DEWIGG, single, boarder

at Mrs. Jordan's.
ROBERT HASTIN, master mechanic

living on Parsonage street, wife and four children. DANIEL WARD, machinist, wife and

two children.
ANTHONY GORDON, wife and two children, living on North Main street. MICHAEL FORD, married, living on

Chapel street.
ANTHONY TOLASKI, married, one PETER SAVINSKI, wife and five

children.

ANDREW SLOVENSKI, wife and wo children. SIMON MASCOVITCH, wife and two

children.
JOHN CADANSKI, single.
JOHN HOISTRICH, wife and three JOSEPH ZURENDI, wife and five

children.

JOSEPH ZLOSKI, wife and one

shild.

JAMES GOLDEN, 25 years, wife and me child, residing in Oregon, Pittston.

OLIVER LEE, single, residence in

Frogtown, Pittston.
ANTHONY MOLWSKI, married, ANTHONY MOLWSKI, married, wlfe in the old country. FRANK JALUZENSKI, married, three children.
PETER BUKOWSKI, single, 35

years.

ANDREW ZUMIDAS, wife and two children.

ANTHONY TALISKA, wife and one child.

child.
MATTHEW TALISKA, brother of
the former, single, 36 years.
ANTHONY NOVOSKI, single 40

ars. ANTHONY NOHALSKI, wife in the old country.

#### THE AREA AFFECTED.

The area affected is about 1,800 feet from the foot of the shaft and lies along a slope which travels off from the main gangway. There is a return way to the foot of the shaft, but this is much longer than the route mentioned and as both roads are clogged up by the fall and the roof above both of them is working the rescuers obsert the shortest route. root above both of them is working the rescuers chose the shortest route in order to reach the men. This was decided upon after consultation among the officials of the other companies, all of whom responded as quickly as they heard the news of the disaster. Every avenue by which the men might possibly be reached was explored and the maps were examined time and again and consultations were frequently held and as soon as an idea was suggested the rescuers were sent down to explore the road and each time they returned with the information that they could go so far and no farther and that the mine was working on all sides threatening other serious falls.

The officials cannot understand how the cave-in is so extensive, as the maps rescuers chose the shortest route in or

the cave-in is so extensive, as the maps show that the pillars were numerous and of the stoutest and were supposed to resist any settling.

#### THE AIR CURRENT.

As soon as the cave occurred the fan As soon as the cave occurred the fan was set to going vigorously and all the air possible was forced into the mine. The air worked its way down the shaft and into the workings ahd branched off all right until it reached the affected area, when it was, of course stopped by the fall.

The fact that some of the air found its way over the outward edge of the fall gave rise to the only hope that the men entombed are still alive, and even men entombed are still alive, and even them no one dared hope that all of them could possibly have survived. In case the men or some of them were not caught by the fall, but were merely hemmed in by it, and m case some of the air forced into the mine finds its way over and through the fall and creaches the men, then it's possible that those not caught by the fall will be found alive. But then this implies that the men will be reached in good time. They are without food or water and cannot live long in that condition.

AFTERNOON SCENES. AFTERNOON SCENES.

AFTERNOON SCENES.
Fully 5,000 people gathered about the mine during the afternoon. Every train and every street car from Scranton. Wilkes-Barre and all other trains poured its crowds into Pittston Junction. The street cars were so full that men and boys sat upon the roofs. People were stretched about the shaft, and the crowd was kent at a distance butter obtravire. was kept at a distance, but so obtrusive did some of them become that they crept under the ropes and crowded about the mouth of the shaft, interfer-

about the mouth of the shart, interfering with the workmen.

Early in the afternoon a special car
came down on the D. L. & W. railroad
with officials of that company on board
and they mingled with the other officials

in making suggestions,
The officials noted upon the scene dur

in making suggestions,
The officials noted upon the scene during the afternoon were:
William Hallstead, general manager of the D. L. & W. and his son George Hallstead, J. T. Richards of Scranton,
J. J. Jermyn and G. B. Jermyn, A. L. Cellins, John and William S. Mears,
Thomas Jones, superintendent of the Connell Coal Co.; Mr. Humphreys of the D. L. & W., Melville Fuller of the D. L. & W., Melville Fuller of the D. L. & W., Walter Dickson, W. G. Thomas of the Laflin Coal Co., W. H. and A. H., Storrs of the D. L. & W., William Langstaff, Daniel Langstaff, Daniel Bogert, T. W. Phillips, Reese Phillips, Thomas Williams of the D. L. & W., superintendent Morgan R. Morgans of the Lehigh & Wilkes-Barre, David Cottle and civil engineer Richards of the L. & W.-B., W. T. Smyth, coal operator; Morgan B. Williams of the Red Ash Coal Co. superintendent W. G. Thomas of the Algonquin Coal Co., W. A. Lathrop, general inside superintendent of the Lehigh Valley Coal Co.

#### PITIFUL SCENES.

A heartrending scenes was witnessed at the mouth of the shaft during the afternoon. Patrick Hart, an aged man, stood there watching every carriage that came up and craning his neck for every word that came from those below. When a reporter approached him he said: "I have come to be an old man and I took great pride in my son James. He was my only son, and he was as good and dutiful a boy as ever breathed. He is down there with the rest. I cannot stand this suspense much longer and I feel as if my heart was breaking." As the old man spoke the tears coursed down his cheeks and his voice was choked with sobs. Just then a carriage shot up from below, and then a carriage shot up from below, and Mr. Hart hurried off to interview the

men who came up on it.

Scores of men and women were there waiting for husbands and sons, and they waited from each property waited from each property. waited from early morning until late a night, ignoring meal time, obvious to ail, but their own great suspense and

#### THE AFTERNOON RESCUERS

The rescuing party that went down at 3 o'clock in the afternoon was in charge of D. W. Evans of the Stevens Coal company. Accompanying the rescuers above named was mine inspector McDonald of the Pittston district. He came up about 4 o'clock and was inter-

"Fully 5,000 people gathered about the mine during the afternoon."

viewed by the Record and spoke freely of the situation. Said Mr. McDonald: "No, I cannot hold out any more hope and until we find out the extent of the cave in or have some idea where the cave-in or have some idea where the men are we cannot say anything definite. The men or some of them may be in an open space with the cave all around them and if the fall along the gangway is broken there is a possibility that we may get at the men in two or three days, but if the fall is extensive all the way it may take a couple of weeks before they are reached.

"The work of the rescuers is not attended by extraordinary peril," con-

tended by extraordinary peril," continued Mr. McDonald, "There is some gas, but all the men use safety lamps and I have stationed a man at the head of the shaft to examine the lamps of all the men before they go down. The air is good as far as it can go and the men have this advantage in their work. The greatest danger is from falls of the roof, as the mine is continually work-ing and the weird sounds caused by the shipping and premonitory symptoms of a cave would fill the uninitiated with terror, but the rescuers are timbering solidly as they go and the way behind them, at least, is secure. Were this tim-bering not going on I would look for an bering not going on I would look for another immense cave that would shut off everything and would place the men weeks from our search. The men are about 1,800 feet from the foot of the shaft and up to 4 o'clock this afternoon we have cleared, timbered and traveled about 900 feet of this distance, and there is still 900 feet of fall and obstruction ahead of us. How soon we will overcome this depends of course, upon the solidity of the fall."

BAPPING FOR ANSWERS

#### RAPPING FOR ANSWERS.

In the afternoon about three o'clock George Thomas, foreman of the Clear Spring mine; Thomas Thomas, foreman at the Exeter; John Reynolds, foreman of No. 6, and William Thomas went down the Clear Spring mine shaft, 3,000 feet distant, and found that mine all right, there being no indication of a soueze.

right, there being no indication of a squeeze.

Between the Clear Spring and the Twin shaft is a barrier of coal about a hundred feet thick. The men rapped repeatedly on this coal, but they could get no answer from the entombed men. The idea was that if the men were merely hemmed in they might have traveled over to this partition and a code of signals might have been established, but the fact that no answer came only served to further strengthen the online. served to further strengthen the opinion that the men were buried by the fall.

#### SENDING DOWN TIMBERS.

All day long timbers were hauled to the mouth of the shaft from the other mines and they were let down on the carriage as fast as they arrived, to be used by the rescuers in propping up the threatening roof and making the way secure for their advance. These timbers looked like good-sized trees and were of the strongest wood.

After looking over the mans care-

bers looked like good-sized trees and were of the strongest wood.

After looking over the maps carefully late last evening it was decided that the best thing to do would be to drive a gangway from the Clear Spring colliery through the barriers of coal above referred to, a distance of about 100 feet, into the Twin shaft slope, when it is expected that it will be possible to locate the entombed men with little trouble. Work was begun on the gangway at 6 o'clock last evening, and will be pushed to completion with all possible speed. Four shifts of five men each, and a diamond drill will be employed in the work, which it is expected to complete in four days at the most. In the meantime work will be pushed with all possible speed in the shaft.

One of the officials found near the 'oot of the shaft a quantity of dynamite aps, which might have exploded with arrible effect had they not been revoved before the fall reached them.

#### THEY FEARED WATER.

During the day fears were entertained buring the day lears were entertained that the upper velns were working and would threaten an inflow of water over the men. To ascertain the state of affairs mine inspector McDonald traveled No. 4 view and found it sound, and to No. 4 view and found it sound, and to the relief of all this was considered a good omen, as fears had been entertained that to get to the men unsurmountable difficulties would be encountered to prevent the falling of the upper vein, even after the lower fall had been cleared. At 4 o'clock a crew of twelve men returned from the depths after two hours' work and reported increased trouble in the falling of top rock. They had gone about 500 feet from the foot and neither saw nor heard anything that gave them the least comfort. The rescuing party was Henry McMillian, Thomas W. Phillips, D. Law. forman; Morgan R. Morgans, Wilkes-Barre, Thomas J. and R. H. Williams, both of Scranton. Their unanimous opinion was that prolonged work would be necessary besore the recovery of the be necessary besore the recovery of the men. About 4:30 another lot came up men. About 4:30 another lot came up and their word was of the same char-acter. No encouragement was extended. At that time there were still hundreds of men working hard conveying to the head props and in various ways extend-ing assistance. Volunteers have come from all sources. Coal companies from Scranton to Wilkes-Barre have gener-custy proffered every help possible and ously proffered every help possible and much has been accepted. The railroad companies have granted every con cession possible to the Newton Coal Co. in the moving of props, ties etc.

#### THE NIGHT RELIEF CORPS.

THE NIGHT RELLEF CORPS.

At 1 o'clock this morning a force of sixty men from the following companies went in the mine to stay until relieved this morning: William A. colliery, ten men; Avoca colliery, ten men; Stephens colliery, ten men; Stephens colliery, ten men; Cangcliffe colliery, ten men; Pittston colliery, ten men; With this force about 120 men will be on had ready to aid in the work of rescue, and yet with this large force no hopes of rescue are entertained for several days at least.

eral days at least.

#### A FEW MORE INCIDENTS

A FEW MORE INCIDENTS.

Some incidents connected with this disaster are painful in the extreme. At about 2 o'clock, an hour before the accident, mayor M. J. Langan, superintendent, Robert Haston, master mechanic, and Daniel Ward, machinist, left for a point at about the centre of the fall which covers ten or twelve acres, to remove a large rotary pump that was in the sump, so that in the event of a cave the pump would be secure. The party just had time to reach the fall when they were caught and likely met instant death, as but few are sanguine enough death, as but few are sanguine enough to look for their return.

to look for their return.

Mrs. Lynott, wife of foreman W. F.
Lynott, is lying at home sick and her
condition is such that she and her seven
children have been shielded from the
terrible accident that has befailen their
mainstay. Her suspicions are aroused,
however, and her anguish is awful to
witness. No more probably than the
feeling of hundreds whose kith and kin
are in the trave of deeth are in the traps of death.

#### ASMALL EXPLOSION.

ASMALL EXPLOSION.

From a source reliable it is learned that on Saturday night a Polander in setting props ignited an accumlation of gas and suffered painful burns. Upon this announcement word was sent to Alexander McCormick general fire boss, and with a small force of men he went to the scene of the trouble, after Michael and Edward Delaney and Thomas Carden had fully substantiated thestory by personal investigation. McCormics and his helpers found a large amout of gas, but not near the men engaged at prop setting, so work was continued and progressing favorably, when suddenly all were caught.

The list of names printed above contains probably all or nearly all of those who are not foreigners. The reason why a complete list of the names of those in the mine cannot be obtained until the bodies are brought out is that superintendent Langan and his assist ants, when they discovered that the care was threatening, each out message. ants, when they discovered that the cave was threatening, sent out messengers on Saturday night and called from their homes as many men as could be reached. Superintendent Langan and all those who went knew the names of those who down were caught in the cave with the others, and those on the surface do not know who went in. There are probably a score more in the mine, but they are entirely or mostly foreigners, and no one yesterday knew who they were. who they were.

#### THRILLING EXPERIENCES

THRILLING EXPERIENCES.

Thomas Gill, one of the four men who came out of the workings alive early in the morning had a most thrilling experience and told Lis story yesterday afternoon. He was working at the foot of the slope while the pillars were cracking and chipping and he became very nervous, fearing a cave. The men timbering were some distance ahead of him and farther in the mine. While he was yet debating the possibilities there came a cyclonic gust of air that lifted him from his feet and carried him along about twenty-five feet and threw him against a pillar. As soon as he landed on his feet he was again picked up bodily and was again thrown some distance forward. His light was out and he was in total darkness. Fearing an explosion of gas if he struck a match he crawled on his hands and knees to the foot of the shaft. On ness. Fearing an explosion of gas if he struck a match he crawled on his hands and knees to the foot of the shaft. On the way he came across Frank Sheridan who had a similar experience and who escaped being entombed by almost a hair's breath. Sheridan is twenty years old. Twenty minutes before that he left No. 3 shaft where the men were, in order to get some drinking water for them. While on his way to the men where they were timbering, and when where they were timbering, and when within a couple hundred feet of them, he was caught by the concussion caused by the cave and was also lifted from his feet and hurled along the gangway. Almost suffocated by the strong gust, bruised by his being knocked against the side of the gangway, and frightened half to death, he crawled to the place where he met Gill. He and Gill gave the signal to be hoisted and were the first to tell those on the surface of the horrible affairs underground.

The other two to get out alive were John Reieher and Jacob Alams, who

The other two to get out alive were John Reieher and Jacob Alams, who were working nearer the foot of the shaft and some distance from the cave.

#### LATEST NEWS FROM THE MINE.

At 10 o'clock last night a shift of even men arrived from below and re-At 10 o'clock last night a shift, of seven men arrived from below and reported encouraging progress in timbering. The men stated that the roof was still settling ahead of them and they were compelled to go very slowly and timber securely. This shift forced its way about 100 feet farther than the 3 o'clock shift, and when the men came out they were within about 700 feet of where the entombed men are supposed to be.

where the entombed men are supposed to be.

11 p. m.—Five more men just returned from the mine. They reported continued creaking and chipping in the dark gangways, showing that there is still danger and that the men must keep on timbering securely as they go.

1 a. m.—Superintendent W. G. Owens of the Exeter colliery and superintendent. W. G. Thomas of the Laflin came up at this time and state that the timbering was going along nicely and if the same progress was continued for twenty-four hours the rescuers would be right on the cave proper and that then the digging would have to begin. How far beyond or under this cave the men are cannot, of course, be stated

"The reason why a complete list of the names of those in the mine cannot be obtained until the bodies are brought out is that Superintendent Langan and his assistants, when they discovered that the cave was threatening, sent out messengers on Saturday night and called from their homes as many men as could be reached. Superintendent Langan [who was among those trapped in the minel and all those who went knew the names of those who down were caught in the cave with the others, and those on the surface do not know who went in. '

and they do not know how much digging will have to be done. If the slope is not entirely choked up progress will be much faster than if it is all filled and upon this depends the length of time which will be consumed before the bodies are reached. It may be two days or it may be two weeks.

## NO HOPE.

Investigation Shows That the Condition in the Mine are Worse Than at

First Thought.

[Special to The Leader.]
PITTSTON. June 20.—Mine inspector McDonald came out of the shaft this afternoon and reported the condition of things worse than anyone had believed. There is no possibility, within the range of human foresight, to save the entombed men.

The ground is sinking continually and keeps up a grinding and crushing that utterly discourages the rescuers and without a doubt seals the fate of the prisoners. The only work that is now being done, or can be done while the ground is settling is to proceed slowly and cautiously and protect the men who are at the almost hopeless task of reaching the buried men.

There is nothing new in the condition of affairs. The people are in an awful state of suspense, waiting for tidings from the depths, but there is no prospects of anything to relieve them.

There is now danger that the ground beneath the Susquehanna river will give way and pour the water into the mines in which case all hope will be forever lost.

The gas is collecting in great quantities and there seems to be no way to prevent the death of the entire party of buried men.

"Up to noon the

names of forty-six

collected. There are in addition thirty-

Hungarians whose

unknown, and the

death list may reach 100."

victims had been

five or forty

names are

Up to noon the names of forty-six victims had been collected. There are in addition thirty-five or forty Hungarians whose names are unknown, and the death list may reach 100.

#### GREAT DISASTERS.

SOME FORMER CATASTROPHES IN THE COAL REGIONS.

Few of Them Have Approached the Latest Pittston Horror In Loss of Life.

Pittston has witnessed wholesale death before, says the Gazette, as in 1871, when by the burning of the West Pittston shaft twenty-five were killed, and in an explosion in the Eagle shaft in 1873 when twenty were burned.

It was at the Avondale mine, in Plymouth, however, that the most noted of mining catastrophies occurred. More than one hundred men and boys were suffocated there on September 6, 1869. The breaker covering the mouth of the shaft, which was the only means of exit from the mine, was destroyed by fire and the debris falling into the shaft, choked it for forty feet.

That made it impossible to force any air to the unfortunates below, and of those who were in the mine at the time not one came out alive. The work of

not one came out alive. The work of recovering the bodies was attended with great danger, and two more lives were sacrificed in that way.

The record in more recent years is nearly as distressing. Thirteen miners lost their lives in a squeeze in the Gaylord mine, in Plymouth, in the early part of February, 1894. Tons of earth and coal were piled on the bodies, and it was many days before they could be recovered. recovered.

recovered.

The Nottingham mine, at the other end of the town, was the scene of a dreadful disaster on February 1, 1890, when an explosion of black damp killed six men. All of the victims, except one, were men with families dependent upon

them.
The miners were engaged in timber The miners were engaged in timbering or bracing some side passages. There was no warning of the impending tragedy, but suddenly there was a blinding flash of fire, followed by a shattering of the passages. Men were hurled many feet, and animals were killed by being thrown against the walls and pillars. The ceiling splintered and great masses of coal fell upon the bodies.

The eleaster could carry only twenty.

The elevator could carry only twenty men each trip, and the last men were lifted out when they were swimming in the pit. Ten minutes later the lower lever was filled to the roof.

lever was filled to the roof.

The Nanticake horror occurred on December 11, 1885, in a higher level of the same mine a week after. Twenty-six men were at work in the seam and not one escaped to tell the story of the catastrophe. What caused it could not be learned, but a break occurred and down the slope rushed the quicksand and water with a noise thatat the top of the shaft sounded like the crashing of an awful hurricane.

Gangs of men were set to work to dig

and water with a noise that the top of the shaft sounded like the crashing of an awful hurricane.

Gangs of men were set to work to dig out the sand that covered the bodies, and at the end of four days had progressed 250 feet. Then there came an ominous sound and they fled in terror, none too quickly, either, for another rush of sand and water made useless all their labor and added twenty feet more of material to be removed.

Engineers from all the neighboring mines met in consultation, and it was decided that nothing could be done in the way of removing the bodies. So the twenty-six men have their common grave in the pit.

A little more than a year before a similar explosion took place in a mine only a short distance from the Nottingham. It was known that gas was escaping in parts of the mine, and notices were posted warning the men against carrying any lamps other than protected ones. Many of the miners were Poles, however, and did not heed the order. One carried a naked lamp and the gas exploded. He was torn to pieces, and the next day when the debris had been cleared away, six bodies of his fellow workmen were found in the same chamber.

In Nanticoke three Poles were instantly killed in mine No. 4, in 1895, by carelessly carrying ordinary lamps into a chamber containing gas, and a short time later the opening of a subterranean reservoir inundated shaft No. 1. This latter incident narrowly missed being of peculiar horror. Three hundred miners were at work in the red ash vein which was 720 feet below the surface of the earth. The reservoir was 150 feet above them me made a rush, but almost inmedia.

was 25 feet below the surface of the earth. The reservoir was 150 feet above them. When the break occurred the men made a rush, but almost immedi-ately the water overtook them.

The Plan for the Relief of the Widows and Orphans of the Victims of the Avondale Disaster Reproduced for the Information of the Pittston Relief Committee-The Prompt Action of the Carolan Glee Club.

For the information of the relief com-mittee who have in charge the distribu-tion of the fund, and in answer to sev-eral incurres. I reproduce from the files

of the Record the plan of relief adopted and carried out with marked success by the committee in charge of the fund contributed for the widows and orphans of the victims of the Avondale disaster. It is as follows:

"Each widow shall be paid the sum of \$200 in equal monthly payments (except in case of non-residents, who shall be paid quarterly) for the ensuing year, commencing Oct. 1, 1869. Each male orphan child under 14 years of a ge and each female orphan child under 16 years of a decased miner shall be paid for the same period, monthly, in equal sums, \$100. Each infirm father, mother of sister, who received support from their sons of brothers who were suffocated in the mines, shall be paid the same amount as allowed widows. Every orphan, over 14, if male, and over 18, if female, shall be paid in full a sum not exceeding \$300, quarterly."

The plan provided further, "that the

The plan provided further, "that the sum of \$5,000 or so much thereof as may be necessary or invested by the order of the board of trustees to meet cases not embraced in the foregoing provisions, i. e., in the relief of persons so connected with the deceased miners and dependent upon them for support as in their judgment may entitle them to relief, or for the payment of necessary funeral expenses or other incidental patters. The remainder of the available fund in the treasury, or that may hereafter accumulate, we recomment to be invested in good securities, bearing interest, and which may readily be constitute a permanent fund, and divisitions and successive the seconstitute a permanent fund, and divisiting the constitute and the neterest, and when required and to constitute a permanent fund, and divisi-ble upon the following basis: One-third to constitute a widows' fund and the remaining two-thirds an orphans' to constitu

"From the widows' fund each widow of a deceased miner shall be entitled to receive from the same \$200 annually, in quarterly payments, on the first day of January, April, July and October, and continue until the whole share of her money, with interest, shall be exhausted. In the event of her death, the balance remaining shall become a part of the whole fund. Should any widow marry the one-half of her share in the fund shall abate from date of marriage and become a part of the whole fund.

fund shall abate from date of marriage and become a part of the whole fund.

"The following rule of distribution shall be observed in the division of moneys composing the orphans' fund: Every male orphan child of a deceased miner under 14 years of age and every female orphan under 16 years of age of a deceased miner shall be entitled to same fund in the following proportions, payable quarterly, but every orphan under the age of 5 years shall be entitled to receive 20 per-cent. more than one over 10 years, and evey orphan child as aforesaid, between the ages of 5 and 10 years, shall be entitled to receive 10 per cent. more than one over 10 years of age.

"As they shall severally attain the ages of 14 and 16 years the whole share of such child, remaining unpaid, with its accumulated interest, shall be paid over in full. Should any one of the said orphans die, leaving an undrawn balance, the same shall become a part of the general widows' and orphans' fund. In all cases, after the first year, payment must be receipted by a guardian or other person legally qualified to act for the orphan. The trustees, however, reserve the right and power to take from either or both of said funds what may be necessary to provide for cases of aid and relief which may not be anticipated or provided for, or change the above ratio of relief in special cases. Your committee recommend that so often as the relief fund shall exceed the sum of \$10,000 the treasurer be directed to deposit the excess with the chartered banks of the county, upon call, provided that they will allow interest at the rate of five per cent, per annum, till such that they will allow interest at the rate of five per cent, per annum, till such that they will allow interest at the rate of five per cent, per annum, till such that they will allow interest at the rate of five per cent, per annum, till such that they will allow interest at the rate of five per cent, per annum, till such that they will allow interest at the rate of five per cent, per annum, till such that t

In conclusion the report says: "Your committee are under the impression that they have commended a plan for the distribution of the fund which ap-

proaches as nearly to a just and equitable division as is practicable under general rules. The number of persons to be relieved rendered it impracticable to deal with each separate case. It was necessary to classify, particularly in view of the length of time the trust must necessarily be extended. We have left a margin of the fund uninvested in order to meet any unforeseen or unexpected case that might arise, so that no individual is excluded from the charity who may establish a claim to a share of it. Under the form of distribution we have adopted, should the fund amount to \$200,000, as it probably will, there will be an annual appropriation in quarterly payments to each widow of a deceased miner of \$200 extending through a term of some eight years or more, which shall be increased or diminished as the fund may be ausmented, or fall short of the estimate. Each orphan child of a deceased miner shall receive \$100 annually in quarterly payments, until the male child reaches 14 years and the female child 16 years of age; and when their respective ages are reached, each will have some \$500 or more as a little outfit in the great struggle of life. This will, of course, depend somewhat upon, the age of the orphan at this date. To equalize, however, as much as we can, in the differences of ages we recommend that the orphan under five years of age shall be entitled to 20 per cent. more than one over ten years be allowed 10 per cent. more than one over ten years be allowed 10 per cent. more than one over ten years be allowed 10 per cent. more than one over ten years be allowed 10 per cent. more than one over ten years be allowed 10 per cent. more than one over ten years be allowed 10 per cent. more than one over ten years be allowed 10 per cent. more than one over ten years be allowed 10 per cent. more than one over ten years in the surface will be reached in the distribution of the orphan fund."

This report is signed by Hon. Hendrick B. Wright, George Coray and Dra-

This report is signed by Hon. Hendrick B. Wright, George Coray and Draper Smith. I take the liberty of reproducing it fully in this column in the hope that it will be of some assistance to the Pittaton relief committee in the distribution of the fund now being subscribed for the widows and orphans of those who lie dead in the Newton shaft. I have no doubt that this fund will reach large proportions, and it is necessary that an equitable plan be devised whereby the beneficiaries may receive their just share of the money, in such a manner as will bring them the greatest possible comfort and relief. With the Avondale plan as a basis, together with such modifications as the present conditions may require, the relief committee will no doubt be enabled to make a proper and intelligent distribution of the money now coming in from every quarter. I and intelligent distribution of the money now coming in from every quarter. I earnestly hope that the amount may be large enough to safeguard the interests of these poor widows and orphans and protect them from want for many years to come. This disaster is in some respects even worse than that of Avondale. For in Pittston there is not even the poor consolation of looking upon the faces of the dead victims and giving their dead bodies decent burial. At Avondale the bodies were all recovered. So, it is just as necessary in this case for the great heart of the American people to beat in sympathy as it was twenty-seven years ago. It is just as necessary ty-seven years ago. It is just as necesty-seven years ago. It is just as neces-sary that every man and woman who can aford it give what he or she can to swell the fund and relieve in a measure the great distress that threatens the defenseless women and children whose hopes lie buried in the fatal mine.

orenseless women and children whose hopes lie buried in the fatal mine.

I am very much gratified to see that the Carolan Glee Club has acted promptly upon my suggestion that the opera "Mikado" be reproduced for the benefit of the Pittston sufferers. With commendable alacrity that excellent society has issued a call for the cast and chorus to get together for rehearsal, and the promise is given that from \$1,500 to \$2,000 will be turned into the hands of the relief committee. The first performance will be given in this city July 24, at the Grand Opera House. Manager Burgunder has kindly offered to give the hall free, as his contribution. Now let the electric light company, the stage hands and the orchestra follow the good example and volunteer their services without cost. The newspapers are all right. They will give the use of their columns free, at least the Record will, and I am confident that the other papers will, too. Then let the people buy the tickets and attend the performance. This is all that will be cessary to insure the success of the

undertaking. You have heard this company before, and were delighted with its work. Now you have a chance to be pleased orce more, and at the same do a good deed for sweet charity.

Wouter Van Twiller.

THURSDAY, JULY 2, 1896

## AN APPEAL FOR AID.

MAYOR O'NEILL' CALLS ON THE GEN EROUS PEOPLE OF CARBONDALE.

In Response to the Appeal of the Pittetor Board of Trade He Asks Bis Constitu ents to Act With Promptness-Messrs. Stott and Spencer to Receive Douations.

CARBONDALE CITY, PENNSYLVANIA.

JAMES J. O'NEILL, MAYOR.

In response to the appeal for aid of the Board of Trade of our sister city of Pittston, for the relief of the widows and orphans of the unfortunate victims of the appalling mine disaster at that place.

Notice is hereby given that Jemes Stott, Esq., of the First National Bank. and Clarence E. Spencer, Esq., of the Miners & Mechanics' Savings Bank, here consented to receive subscription

Miners & Mechanics' Savings Bank, have consented to receive subscription for this most worthy cause, and will acknowlede the same in the local papers. The people of Carbondale are urg d to meet this call with generosity and promptness. James J. O'NEILL Luly 2d 1898. promptness. July 2d, 1896.

MONDAY, JULY 6, 1896.

## PITTSTON.

A Sad Fourth of July in This City--Polgnant Sorrow Reigned Supreme-Notes from the Sister City. Special Correspondence of The Truth.

from the Sister City.

Special Correspondence of The Truth.

Pittston, July 6.—This was the soddest Fourth of July ever witnessed in Pittston. In former years the morning hours usually witnessed the parade of the many social organizations. Men wearing handsome regain thronged our main thoroughdare. Children dressed in white carrying flowers marched along the streets. The blare of brass bands and the stirring strains of fife and drum thrilled the heart with patriotic emotions, while the stars and stripes in flag, banner and bunting rose and fell upon the breeze, minutely but eloquently proclaiming the blessing of freedom beneath their folds.

All was changed Saturday, and but for the spiteful snappings of fire crackers with which children amuse themselves, the anniversary of the declaration of our independence could not be distinguished from an ordinary Sabbath. The marching coefficies and uen in regails were absent from our streets. Hushed were the soul-stirring music of the brass band and the fifes and drums, and the graud old fing of freedom changes at half mast draped in mourning.

Sad-ered women sat at their doorstons.

in mourning. Sad-eyed women sat at their doorstons

In mourning.

Sad-eyed women sat at their doorstops watching for the coming of those who but a year ago were most active helping to observe with natriotic ferror the glorious Fourth, while children, careless and ignorant of the great calamity that has befallen on their homes, ask their mothers why their fathers come not to help them in their environment.

Meanwhile the eavage mine guards well its secret. Defant of the puny efforts of man the greedy earth refuses to give up its prey and fiercely men, who hyavely but vainly toil for the freedom of those engulfed in awful avalouche of rock and soil which has buried the victims of the Twin shaft forever from view. To-day Pittston is the saddest city over which waves the stars and stripes of our beautiful flag. May we never witness such nother Fourth of July, and may our sis-

ter cities in the union be ever free from such calamities as has made this a town

such calamities as has made construction bed last evening at the Henry Gratton held last evening at the Henry Gratton Hall the following officers were elected for the ensuing term: President, Mr. Gobn McDonnell; first vice-president, Mr. Jacob Milhauser; second vice-president, Mr. James Corcoran; recording secretary, Mr. George Daniels; treasurer, Mr. John Burke; financial secretary, Mr. Henry McHale; guardian, Mr. Jean Smith; Mr. James Corcoran; recording secretary, Mr. George Daniels; treasurer, Mr. John Burke; financial secretary, Mr. Henry McHale; guardian, Mr. Jean Smith; guide, Mr. Edanual Barke; trustees, John McDonnell, Mr. James Corcoran and Mr. Bert Smiles. The reports of the officers showed that the association is in a flourishing condition. Having now a membership of about 90 members in good standing and receiving applications for further admissions at each new meeting. The trolley rice that was to have occurred on the 9th of July, has been postponed to a future date in consequence of the sad accident at the Twin shaft. Votes of condolence and sympathy were passed to the afflicted relatives of the entombed men; a vote of thanks was also passed to the retiring officers. After it was carried the new officers were installed by President McDonnell, after which the meeting was adjourned to meet again on Thursday next, July th.

## ABOUT 1,000.

A Very Generous Contribution by St. Rose Congregation for the Pittston Sufferers

The amount of the collection taken up on Sunday morning at St. Rose's church for the benefit of the Pittston sufferers was over \$600 from the con-gregation at large, in addition to which suncers was over \$600 from the congregation at large, in addition to which are other sums contributed by parish organizations. Among these are \$25 from the St. Joseph's cadets; \$10 from St. Patrick's society; \$30 from the Athar society; \$50 from the Catholic Mutual Benevolent association, and other equally generous donations by other societies which have not yet been officially heard from. Father Coffey said this morning that he thought the parish contributions would exceed \$1,000 when turned over to the general fund. In the sums herein mentioned the subscriptions of Father Coffey and other priests of the parish to the general Carabondale fund and already acknowledged in the paper are not included. The largest parish in the diocese, the cathedral at Scranton, gave between \$1,100 and \$1,200, so that the generosity of the offering of the St. Rose people will be at once realized.

MONDAY.....AUGUST, 24 1896

#### \$1,386.90.

Total Amount to Date Subscribed In This City to the Pittston Relief Fund.

The subscriptions by the miners and The subscriptions by the miners and laborers at No. 1 mine on the south side to the fund in aid of the sufferers by the Pittston mine disaster have been handed in to the First National bank. They bring the total of subscriptions from this city up to \$1386.90.

Previously acknowledged. \$1260.90
Employes No. 1 tunnel 102.50
Patrick Linnen 53 00
Frank Larkin 1 00 
 Patrick Linnen
 \$1 00

 Frauk Larkin
 1 00

 Patrick Clifford
 1 00

 Michael McGowan
 1 00

 Thomas Mullen
 1 00

 Patrick Atkinson
 1 00

 Thomas Duffy
 50

 John McDonough
 1 00

 Thomas Linnen
 1 00

 Bernard Keogh
 50

 Frank Clifford
 50

 Joseph Carew
 25

 John McKenna
 25

| James   | Duggan      |           |         | 50 |
|---------|-------------|-----------|---------|----|
| Edwar   | d Linnen    | :         |         | 25 |
| Sylves  | ter McGarry |           |         | 25 |
| John    | Tool        |           |         | 25 |
| Domin   | ick Killeen |           |         | 50 |
| Thoma   | s Barrett   |           |         | 25 |
| Thoma   | s Loftus    |           |         | 25 |
|         | look        |           |         | 50 |
| John F  | Barrett     |           |         | 50 |
| John M  | lav         |           | 100     | 50 |
| John F  | innegan     |           |         | 50 |
| Peter I | Cerins      |           |         | 25 |
| John S  | ullivan     |           |         | 50 |
| Johnny  | Burke       |           |         | 25 |
| Willia  | n Casey     |           |         | 50 |
| John C  | arew        |           |         | 50 |
| John K  | ane         |           |         | 50 |
| Barney  | Grier       |           |         | 50 |
| Daniel  | Grady       |           |         | 50 |
| Michae  | l Tool      |           |         | 50 |
| James   | Mason       |           |         | 50 |
| Thoma   | s Clifford  |           |         | 50 |
| Willian | n O'Malley  |           |         | 50 |
| John T  | oolan       | • • • • • |         | 50 |
| Patrick | Eagan       |           | • • •   | 25 |
| Thoma   | s Murray    |           |         | 25 |
| Frank   | Lavelle     |           | • • •   | 50 |
| Willian | n McGarvey  |           |         | 50 |
| Michae  | l McGowan   |           |         | 50 |
| Patriol | McGowan     |           | • • •   | 25 |
| John C  | Quinn       |           |         | 25 |
| John I  | onnelly     |           |         | 50 |
| Edmon.  | Uone        |           |         | 25 |
| THANK   | d Hope      |           | • • • • | 20 |

#### SCRANTON'S GIFT.

Which Has Been Added to the Twin Shaft Relief Fund.

Luther Keller, chairman of the man-ufacturers' committee of the Scranton board of trade, which had in charge the

board of trade, which had in charge the work of raising a fund for the relief of the sufferers from the Twin shaft disaster has made his report as follows:

In addition to the direct appeals of the board, some of our prominent merchants sent letters to wholesale dealers in their several lines, and from whom they purchased goods. This proved to be a very successful plan, and resulted in adding \$5,526.47 to the fund.

Following is a detailed statement of the amounts received through the different sources to wit:

| referr sources to wit:      |           |
|-----------------------------|-----------|
| Through the Scranton Board  |           |
| of Trade                    | 10,855.03 |
| Simpson & Watkins           | 2,004.00  |
| Cleland, Simpson & Taylor   | 1,567.47  |
| Hunt & Connell              | 483.00    |
| Megargel & Connell          | 362.00    |
| Casey Brothers              | 355.00    |
| T. J. Kelly & Co            | 200.00    |
| Matthews Brothers           | 190,00    |
| Williams & McAnulty         | 165.00    |
| Scranton Supply & Machinery |           |
| Co                          | 75.00     |
| First National Bank         | 70 00     |
| Henwood & Co                | 15.00     |
|                             |           |

Total......\$16,381.50 WEDNESDAY ... SEPTEMBER 9 1896

## \$70,000.

A GOODLY SUM FOR THE TWIN SHAFT SUFFERERS

How the Money is to be Apportioned Among the Relatives of the

Victims.

At a meeting of the Twin Shaft Re-lief association, held in Pittston on Monday afternoon, the executive com-mittee submitted the following plan for distributing which was approved and the first payment will be made next

"The sum of 860 per year to each male child until he arrives at the age of 12

"Sixty dollars per year to each female child until she arrives at the age of 13

"The allotments to the children may be paid to their mothers.
"The trustees, nevertheless, reserve the right and power to take from either or both of said funds what may be necessary to provide for cases in aid and relief which may not here be anticipated or provided for, or may change the above ratio as in their judgment may seem proper."

A schedule of beneficiaries was also submitted and the committee estimates that the payments to the widows and dependents will continue for ten years.

Resolutions upon the death of Charles F. Warburton, a member of the relief association, were adopted. The treasurer's report was submitted, and is as follows:

RECEIVED.

First National bank deposit...\$32,382.82 Miners' Savings bank, deposit......\$22,438.89 Less vouchers drawn 12,350.00-10,088.89 People's Saving bank, deposit...1,804.63

\$44,276.34 In hands of treasurer. 1,000,00
Investments. 12,300,00

\$57,576.34

UNCOLLECTED.

Total fund......\$29,790 94

FRIDAY ..... AUGUST, 14 1896

#### AT REST.

The Twin Shaft Victims Will Lie in

Their Deep Grave.

It will be remembered that a few weeks ago the officials of several companies met to give expert testimony on the advisability of continuing the search for the entombed men in the Twin shaft. Yesterday the Pittston Item, comment-

ing on that meeting said:
"Two statements recently made by
Mr. Law in connection with the Twin
shaft are of considerable interest. First, shaft are of considerable interest. First, he said that before he stopped worked at the cave he invited the general managers of the different mining companies in this vizinity to visit the mine. The visit was made about three weeks ago. After inspecting the mines thoroughly Mr. Law requested each gentleman to write a private letter informing him of their views about the cave and the advisability of continuing severating for their views about the cave and the advisability of continuing excavating for budies of the entombed miners. Each gentleman did as requested and while the writers differed about the cause of the cave, each and everyone informed

"Set aside \$2,500 for a contingent fundand \$1,250 for expenses and the balance of the fund to go to the widows and the dependent relatives as follows:

"The sum of \$120 per year to each widow.

"The sum of \$120 per year to each entirely dependent relative living singly. Where two or more live in the same family \$120 per year to the head and \$60 per year to each additional person.

"In case of death of any of the children the balance that would have continued to them to go to the fund for the widows and dependent relatives.

"In case of death of any widow or dependent relatives to prolong payments.

"In case of marriage of any widow or dependent relatives payment to cease and the balance that would have continued to go to the fund.

"The case of marriage of any widow or dependent relatives payment to cease and the balance that would have continued to go to the fund.

"The allotments to the children may be paid to their mothers.

"The trustees, nevertheless, reserve

## 1959: January 22: Knox Mine Disaster

Roof of the Knox Coal Company's River operations along the east bank of the Susquehanna River, in Port Griffith, Jenkins Township, Luzerne County gave way. Twelve men killed when the roof of the River Slope gave way, at 11:22 A. M., and millions of gallons of water from the Susquehanna River poured into the mine. \$250,000 worth of railroad cars, mostly from the Lehigh Valley Railroad, were tossed into the breach in an effort to stop the river from filling the mine below.

(end of Mine Disaster Report)

In January 1870, it was reported in the *Carbondale Advance* of January 22, 1870, that "the D. & H. C. Co. are not anxious to run their mines up to their full capacity at present." Here is that report:

"The Coal Business. / We are informed that the D. & H. C. Co. are not anxious to run their mines up to their full capacity at present. . . / The great difficulty at present in the business in Schuylkill Co. and elsewhere seems to be that Coal is low and labor high." (*Carbondale Advance*, January 22, 1870, p. 3)

In the February 12, 1870 issue of the *Carbondale Advance*, it was reported that the Delaware and Hudson Canal Company shipped 377 cars of coal over the Erie road from Honesdale on Saturday, February 5, 1870. Here is that report:

"The Del. & Hud. C. Co. shipped 377 cars of coal over the Erie road from Honesdale, on Saturday of last week. They contained over 3,000 tons of coal." (*Carbondale Advance*, February 12, 1870, p. 3)

In the Saturday morning, July 2, 1870 issue of the *Carbondale Advance*, the following report on the coal trade is presented:

"The Coal Trade. / The Pennsylvania Coal co. have made a reduction in the price of their coal to be delivered the coming month. / A large majority of the collieries in the Schuylkill region are still idle. The *Anthracite Monitor* notices the following as at work on the basis of 1869: Districts No. 2 and 3; James Oliver's Mine; Ryan & Co.'s Mine; Samuel Morgan & Co.'s Mine; Best, Davis & Co.'s Mine. / The men are idle at Gaylord's Shaft in Plymouth, also at Fellows, Dodson & Co.'s new Shaft. / There is great activity in the business in the Lackawanna valley, although coal continues very low in the market. Fears are constantly entertained that unless coal advances,

the work will not long continue to be driven with so much energy. / The Auction sale of Scranton coal in New York on Wednesday was spirited, and prices or he different sizes ranged from \$4 to \$5.25. This sustaining of prices at their previous low rates, when a farther reduction was feared, is somewhat encouraging."

Remarkably, in late September 1870, both the Delaware and Hudson railroad and canal were shut down "on account of lack of water for their Engines and canal." Consequently, the D&H mines were shut down. Fires on the mountain West of Carbondale were raging out of control. In the *Carbondale Advance* of September 24, 1870, we read:

"The Drought. / The gentle rain over which we rejoiced as we went to press last week, proved to be but slight, and continued dry and sunny weather since has increased the oppressive drought. / The Del. & Hud. C. Co. has been obliged to suspend mining and shipping Coal, on account of lack of water for their Engines and canal [emphasis added]. / Our mines are consequently of necessity idle, and will probably have to remain so until we have rain. / Fires are raging upon the mountain West of town, which will endanger considerable quantities of bark and timber if not soon quenched by rain." (*Carbondale Advance*, September 24, 1870, p. 3)

In late April 1871, Patrick Blewitt, Esq. of Scranton was appointed Mine Inspector for the Carbondale district. His office would be located at 306 Lackawanna Avenue, Scranton. The following notice announcing this change of mine inspectors was published in the *Carbondale Advance* on April 29, 1871:

"Mine Inspector. / Patrick Blewitt Esq. of Scranton, has been appointed Mine Inspector for this district, to fill the vacancy occasioned by the resignation of Andrew Nicol Esq for the purpose of again assuming the Superintendency of the mines of the Del. & Hud. C. Co. / Mr. Blewitt has received his commission and opened his office at 306 Lackawanna Avenue, Scranton, with F. D. Collins, Esq." (*Carbondale Advance*, April 29, 1871, p. 3)

D&H coal shipments for the week ending Saturday, August 19, 1871, were up when compared with the shipments for the same week in 1870. Total shipments for the season, to that point in 1871, however, were less than in 1870. Those facts we know from the following notice that was published in the *Carbondale Advance*, August 26, 1871, p. 3:

"Coal Shipments. / DELAWARE AND HUDSON CANAL COMPANY, / OFFICE COAL DEPARTMENT / PROVIDENCE, PA, Aug. 21<sup>st</sup>, 1871. / Coal mined and forwarded by Del. & Hud. Canal Co., for the week ending Saturday, Aug. 19<sup>th</sup>, 1871:

|       | WEEK.     | SEASON.    |
|-------|-----------|------------|
| North | 53 604.19 | 663 096.02 |
| South | 8,691 10  | 155,485.02 |
| Total | 62,296.09 | 818,581.04 |

## Corresponding Time in 1870

| North                | 42,049.18 | 1,433,811.00 |
|----------------------|-----------|--------------|
| South                | 7,357.19  | 290,399.17   |
| Total, 1870          | 49,407.17 | 1,724,210.17 |
| Total Increase, 1871 | 12,888.12 |              |
| Total Decrease,      |           | 905,629.13   |

## E. W. WESTON, Supt.

(Carbondale Advance, August 26, 1871, p. 3)

An extraordinary description of the Luzerne Coal Region was published in *Forney's Press* and reprinted in the November 18, 1871 issue of the *Carbondale Advance*, p. 2. The primary focus of this remarkable article is on the four great coal companies in this region: the Delaware and Hudson Canal Company, the Pennsylvania Coal Company, the Delaware, Lackawanna and Western Railroad Company, and the Wilkes-Barre Coal and Iron Company. Among the many very interesting facts reported, in 1870, in this article—and possibly nowhere else—are the following:

- In 1807, Abijah Smith, of Plymouth, purchased an 'ark,' commonly used for the transportation of plaster, and loaded it with 50 tons of coal and floated it down to Columbia, in Lancaster County. This was probably the first cargo of anthracite coal that was ever offered for sale in this or any other country.
- On February 11, 1808, Hon. Jesse Fell, of Wilkes-Barre, in the old Fell Tavern at the corner of Northampton and Washington Streets in Wilkes-Barre, made the important discovery of how to burn anthracite coal without an air blast.
- In the Lackawanna and Wyoming Valleys there are 120,000 acres of anthracite coal, upon which are erected and at work one hundred and twenty collieries, giving employment to about 30,000 men and boys, and producing from seven to eight millions of tons of coal at an average cost at the mines of \$2 per ton, total cost fourteen millions of dollars. The amount of capital invested is about \$8,000,000. Estimating these 120,000 acres as worth \$300 per acre, which is the least price for which any of them can be bought, they must be worth \$36,000,000, making the whole value of the collieries, lands, and transportation of this region \$50,000,000.
- Each man and boy about the mines is estimated to produce two hundred tons of coal per annum, which would give each, at \$1.50 per ton, \$300 per year. Fifty cents is deducted from the two dollars, estimated as the cost of mining the coal, for machinery, etc.
- One life is generally estimated as lost to every 50,000 tons production of coal, and five injuries, other than fatal.

- The **Delaware and Hudson Canal Company** [emphasis added] has a capital of fifteen million dollars, and is divided into the following seven departments: Mining, railroads, canal, harbor and yard, sales, Albany and Susquehanna Railroad, Rensselaer and Saratoga Railroad. This corporation owns nine thousand acres of coal lands upon which are erected thirty collieries. They also control as much more by virtue of leases or mining rights. Their lands are scattered for a distance of thirty miles over the two valleys, or from above Carbondale to below this place. At Carbondale they have two thousand acres; in the vicinity of Archbald, six miles south of Carbondale, about one thousand acres; at Olyphant, four miles south of Archbald, one thousand acres; one thousand or more acres in the vicinity of Scranton, from two to three thousand acres near Wilkes-Barre, besides other scattered tracts. In addition to its coal lands the company has a double track gravity railroad from Olyphant to Honesdale, and a locomotive road from Scranton to Carbondale. They are lessees of the Union Coal Company's road from Scranton to Wilkes-Barre, of the Albany and Susquehanna Railroad from Binghamton to Albany, with which they are connected by the Jefferson Railroad from Carbondale to Harpersville, on the Albany and Susquehanna. The latter road crosses the Erie Railroad at Lanesboro', and connects with it there. They are also lessees of several other railroads which open a place for their coal in Canada and Northern New England. During 1870, up to December, when the great strike began, they mined 2,365,000 tons of coal. During the month of August, 1871, their shipments amounted to 295,000 tons. In the coal department of this company are employed six thousand men and boys. The president of the company is Thomas Dickson, of Scranton; treasurer, Charles P. Hart, and Secretary, Daniel Wilson, both of New York city, in which place most of the capital stock is owned. The general superintendent is Coe F. Young, of Honesdale.
- The **Pennsylvania Coal Company** [emphasis added] is an offshoot of the Delaware and Hudson. It has a capital of four millions, and is divided into two departments, mining and transportation. Upon their lands, located mostly in the vicinity of Pittston, Dunmore and Scranton, are erected twelve shafts or collieries, three slopes, three tunnels, and nine breakers or machines for crushing the coal. Their mining capacity is from 1,200,000 to 1,400,000 tons per annum. They own a railroad from Pittston to Hawley, and the Pennsylvania Coal Company's railroad from Hawley to Lackawaxen, on the Erie Railroad. The first is a gravity and the last an ordinary passenger road, owned by the company and leased by the Erie. /This company employs about three thousand men and boys in mining. Its officers are: Gen. John Ewen, president; Geo. A. Hoyt, treasurer; E. H. Mead, Secretary, and nine directors, all residing in New York City.

- The Delaware, Lackawanna and Western Railroad Company [emphasis added] began to ship coal in 1851. During the last three months of that year, they shipped 6,000 tons of coal. Now they ship from 10,000 to 11,000 tons per day having gained 100,000 tons [possibly should read 10,000 tons] per day on the average shipment. In 1855 they shipped 276,000; in 1861, 1,104,000, and in 1870, 2,350,341 tons of coal. This company owns twelve collieries within a radius of three miles of Scranton, one in Kingston, and two in Plymouth. Of the last two, one is the Avondale shaft. They have a lease of the Morris and Essex Railroad, running from Hoboken to Aston, and connecting with their road, the Delaware, Lackawanna and Western, at Washington, N.J. They also control the following roads: The Syracuse and Binghamton, connecting those two places; one connecting Syracuse with Oswego; the Utica division, from Chenango Forks, near Binghamton, to Utica, and the Lackawanna and Bloomsburg, from Scranton to Northumberland. These road furnish direct communication between tide water and the lakes. The capital of this corporation is fifteen millions. It is the only company which makes auction sales of coal in New York.
- The Wilkes Barre Coal and Iron Company [emphasis added] comes next on the list. It is a young but very flourishing corporation. The mines and collieries are situated near this town, in the townships of Wilkes-Barre, Hanover and Plymouth. They have about five thousand acres of coal land upon which are located seven shafts and mine slopes, besides eleven 'breakers.' They have fourteen single and five double winding engines for raising and lowering cars, etc., besides pumps for raising water out of the mines, four engines for working the enormous fans which are used to ventilate the mines, eleven break engines, and much other fine machinery, all of which is repaired at their own machine shop. The yearly capacity of their mines is about one and a half millions of tons. To get out this immense quantity of coal the company employs 3,000 men and boys. It has a capital of four and a half millions The President is Charles Parrish, esq., of Wilkes-Barre. This being a new company, it has an immense quantity of coal land which has not yet been worked. Some of their richest shafts have just been opened. Their richest improved seam is the Baltimore, which is from twenty to twenty-four feet thick

Here, then, is the complete text, for the record, of this extraordinary article "from the correspondence of *Forney's Press*, as reprinted in the Saturday, November 18, 1871 issue of the *Carbondale Advance*:

"The Anthracite Coal Fields. / We copy the following interesting description of the Luzerne Coal Region from the correspondence of Forney's Press: / The anthracite coal trade of Pennsylvania is commonly said to have begun at Mauch Chunk in 1820. This is a mistake. In the year 1807 Abijah Smith, of Plymouth, a township below here on the opposite side of the river,

purchased an 'ark,' commonly used for the transportation of plaster, loaded it with fifty tons of coal, and later in the season floated it down to Columbian, in Lancaster Co. This was probably the first cargo of anthracite coal ever offered for sale in this or any other country. The important discovery of burning coal without an air blast was made by Hon. Jesse Fell, of Wilkes-Barre, on the 11<sup>th</sup> of February, 1808. In the old Fell Tavern, at the corner of Northampton and Washington Streets. I saw the grate which Judge Fell made and used on that occasion. It is a curious relic of the past. During the year 1813 Mr. Abijah Smith and his brother sold through their agents in New York, \$2,691.20 worth of coal. It was sold by the chaldron, containing about thirty-six bushels, being retailed at twenty-five dollars per chaldron. In 1825 the Delaware and Hudson Canal Company was started at Carbondale, and from this time may be dated the importance of the coal trade of this part of the State. These two valleys have an area of one hundred and ninety square miles, or one hundred and twenty thousand acres of coal, upon which are erected and at work one hundred and twenty collieries, giving employment to about 30,000 men and boys, and producing from seven to eight millions of tons of coal at an average cost at the mines of \$2 per ton, total cost fourteen millions of dollars. The amount of capital invested is about \$8,000,000. This does not include investments in means of transportation, such as railroads, canals, etc., which probably amount to \$30,000,000 more. Estimating these 120,000 acres as worth \$300 per acre, which is the least price for which any of them can be bought, they must be worth \$36,000,000, making the whole value of the collieries, lands, and transportation of this region \$50,000,000. Each man and boy about the mines is estimated to produce two hundred tons of coal per annum, which would give each, at \$1.50 per ton, \$300 per year. Fifty cents is deducted from the two dollars, estimated as the cost of mining the coal, for machinery, etc. One life is generally estimated as lost to every 50,000 tons production of coal, and five injuries, otherwise than fatal, must be charged to the same account. / The principal companies engaged in mining coal in these two valleys [Lackawanna and Wyoming], are the Delaware and Hudson Canal Company, the Pennsylvania Coal Company, The Delaware, Lackawanna and Western Railroad Company, and the Wilkes-Barre Coal and Iron Company. The Delaware and Hudson Canal Company has a capital of fifteen million dollars, and is divided into the following seven departments: Mining, railroads, canal, harbor and yard sales, Albany and Susquehanna Railroad, Rensselaer and Saratoga Railroad. This corporation owns nine thousand acres of coal lands upon which are erected thirty collieries. They also control as much more by virtue of leases or mining rights. Their lands are scattered for a distance of thirty miles over the two valleys, or from above Carbondale to below this place. At Carbondale they have two thousand acres; in the vicinity of Archbald, six miles south of Carbondale, about one thousand acres; at Olyphant, four miles south of Archbald, one thousand acres; one thousand or more acres in the vicinity of Scranton, from two to three thousand acres near Wilkes-Barre, besides other scattered tracts. In addition to its coal lands the company has a double track gravity railroad from Olyphant to Honesdale, and a locomotive road from Scranton to Carbondale. They are lessees of the Union Coal Company's road from Scranton to Wilkes-Barre, of the Albany and Susquehanna Railroad from Binghamton to Albany, with which they are connected by the Jefferson Railroad from Carbondale to Harpersville, on the Albany and Susquehanna. The latter road crosses the Erie Railroad at

Lanesboro', and connects with it there. They are also lessees of several other railroads which open a place for their coal in Canada and Northern New England. During 1870, up to December, when the great strike began, they mined 2,365,000 tons of coal. During the month of August, 1871, their shipments amounted to 295,000 tons. In the coal department of this company are employed six thousand men and boys. The president of the company is Thomas Dickson, of Scranton; treasurer, Charles P. Hart, and Secretary, Daniel Wilson, both of New York city, in which place most of the capital stock is owned. The general superintendent is Coe F. Young, of Honesdale. / The Pennsylvania Coal Company is an offshoot of the Delaware and Hudson. It has a capital of four millions, and is divided into two departments, mining and transportation. Upon their lands, located mostly in the vicinity of Pittston, Dunmore and Scranton, are erected twelve shafts or collieries, three slopes, three tunnels, and nine breakers or machines for crushing the coal. Their mining capacity is from 1,200,000 to 1,400,000 tons per annum. They own a railroad from Pittston to Hawley, and the Pennsylvania Coal Company's railroad from Hawley to Lackawaxen, on the Erie Railroad. The first is a gravity and the last an ordinary passenger road, owned by the company and leased by the Erie. /This company employs about three thousand men and boys in mining. Its officers are: Gen. John Ewen, president; Geo. A. Hoyt, treasurer; E. H. Mead, Secretary, and nine directors, all residing in New York City. / The Delaware, Lackawanna and Western Railroad Company began to ship coal in 1851. During the last three months of that year, they shipped 6,000 tons of coal. Now they ship from 10,000 to 11,000 tons per day having gained 100,000 tons [possibly should read 10,000 tons] per day on the average shipment. In 1855 they shipped 276,000; in 1861, 1,104,000, and in 1870, 2,350,341 tons of coal. This company owns twelve collieries within a radius of three miles of Scranton, one in Kingston, and two in Plymouth. Of the last two, one is the Avondale shaft. They have a lease of the Morris and Essex Railroad, running from Hoboken to Aston, and connecting with their road, the Delaware, Lackawanna and Western, at Washington, N.J. They also control the following roads: The Syracuse and Binghamton, connecting those two places; one connecting Syracuse with Oswego; the Utica division, from Chenango Forks, near Binghamton, to Utica, and the Lackawanna and Bloomsburg, from Scranton to Northumberland. These road furnish direct communication between tide water and the lakes. The capital of this corporation is fifteen millions. It is the only company which makes auction sales of coal in New York. / The Wilkes Barre Coal and Iron Company comes next on the list. It is a young but very flourishing corporation. The mines and collieries are situated near this town, in the townships of Wilkes-Barre, Hanover and Plymouth. They have about five thousand acres of coal land upon which are located seven shafts and mine slopes, besides eleven 'breakers.' They have fourteen single and five double winding engines for raising and lowering cars, etc., besides pumps for raising water out of the mines, four engines for working the enormous fans which are used to ventilate the mines, eleven break engines, and much other fine machinery, all of which is repaired at their own machine shop. The yearly capacity of their mines is about one and a half millions of tons. To get out this immense quantity of coal the company employs 3,000 men and boys. It has a capital of four and a half millions The President is Charles Parrish, esq., of Wilkes-Barre. This

being a new company, it has an immense quantity of coal land which has not yet been worked. Some of their richest shafts have just been opened. Their richest improved seam is the Baltimore, which is from twenty to twenty-four feet thick. / Besides these four great companies, much other coal land is owned by other corporations and private individuals. The Wyoming Coal and Transportation Company and the Lehigh Valley Railroad Company own several collieries. The Pennsylvania Railroad owns coal lands in the southern part of Wyoming Valley, at Nanticoke, a village called after a tribe of Indians of that name. They have three or four collieries; the vein is magnificent, and the works very fine. The Grand Tunnel Mines, as they are called, are sunk in the famous Back Mountain vein, which is finer than anywhere else, being from twenty-two to twenty-four feet thick. / Anna." (Carbondale Advance, November 18, 1871, p. 2)

Let's take a closer look at the material presented in that article that relate to the D&H in 1870. From the Forney's Press article in question, we learn that

- the company had a capital of fifteen million dollars
- there were seven departments in the company: mining, railroads, canal, harbor and yard sales, Albany and Susquehanna Railroad, Rensselaer and Saratoga Railroad.
- the corporation owned nine thousand acres of coal lands upon which were erected thirty collieries
- land owned: at Carbondale, 2,000 acres; at Archbald, about 1,000 acres, Olyphant, 1,000 acres; vicinity of Scranton, 1,000 acres; near Wilkes-Barre, from two to three thousand acres
- during 1870, up to December, when the great strike began, the company mined 2,365,000 tons of coal
- in the coal department six thousand men and boys are employed
- the president of the company, Thomas Dickson, of Scranton; treasurer, Charles P. Hart, and Secretary, Daniel Wilson, both of New York city; the general superintendent, Coe F. Young, of Honesdale.
- most of the owners of the company's capital stock lived in New York City

The Pennsylvania Constitution of 1874 prohibited transportation companies from owning coal lands. Presumably the Pennsylvania Constitution applied only to Pennsylvania companies. As a New York corporation, the requirements of the Pennsylvania Constitution would not apply to the D&H.

George Bryant, aged about 14 years, was run over by the cars in the mines during the first week of October 1874. He was the son of Jacob Bryant of Carbondale. Here is the accident report that was published in the *Carbondale Advance* of October 19, 1874:

"**Loss of Limb.** / George, son of Jacob Bryant, of this city, aged about 14 years, was run over by the cars in the mines in the latter part of the last week, and one limb badly crushed. It was amputated below the knee on Wednesday of this week by Dr. R. Ottman, assisted by Dr. Charles Burr." (*Carbondale Advance*, October 10, 1874, p. 3)

On Wednesday, September 29, 1875, the representatives of the leading coal companies, one of which was the D&H, met and agreed to advance the price of the smaller sizes of coal ten cents per ton on the first of October. The D. & H. C. Co. and the D. L. & W. R. R. also agreed to suspend shipments to competing points for two weeks, and to confine their business during that time to Western and local trade. Because of those agreements, shipments of coal over the D&H Gravity Railroad to Honesdale would have to be suspended for two weeks, beginning October 2<sup>nd</sup>. Those agreements were announced in the October 2, 1875 issue of the *Carbondale Leader*, as follows:

"Representatives of the leading coal companies, including those of the Delaware & Hudson Canal Company, the Reading Railroad Company, the Lehigh Valley Company, the Delaware, Lackawanna & Western Railroad Company, and the Lehigh & Wilkes-Barre Coal company held a meeting on Wednesday of last week and agreed to advance the price of the smaller sizes of coal ten cents per ton on the first of October. The D. & H. C. Co. and the D. L. & W. R. R. also agreed to suspend shipments to competing points for two weeks, and to confine their business during that time to Western and local trade. Therefore the shipments of coal over the gravity road from here to Honesdale will be suspended for two weeks from to-day. Thus the parties in the great combination help each other." (*Carbondale Leader*, October 2, 1875, p. 3)

Interesting mining statistics for 1875 for the Eastern District of the Wyoming Coal Fields are presented in Hollister (pp. 165-166), as follows:

"In 1875, 7,947,861 tons of coal were mined in the Eastern District of the Wyoming Coal Fields. . . / The amount [in tons] mined by the different Companies in the District during the year is as follows:

| D. & H.Company                                   | 1,431,838 |
|--|-----------|
| D. L. & W. Company                               | 1,173,169 |
| Pennsylvania Company                             | 1,627,966 |
| Others mined below Scranton                      | 1,205,312 |
| Others mined above Scranton                      | 1,499,857 |
| And there is an estimte of 24,000 tons for local | sales.    |

*Hollister* (pp. 165-166) also provides some very interesting data on the mines in the District in 1875, as follows:

"There are employed in the District 17,552 men and boys, 2,103 mules and 9,867 coal cars. The amount of coal used in and around the mines to furnish steam power to breakers, mines, fans and furnaces during the year is 291,419 tons and there were sold to 13,000 miners 156,000 tons. / There are laid in the mines 191 miles of headings or gangways, and 181 miles of air ways. There are laid in the mines 113 3/4 miles of 'T' iron, and 119 3/4 of strap iron track. Outside the mines leading to and from the breakers, there are laid 45 miles of 'T' iron, and 12 1/5 of strap iron track." (Hollister, pp. 165-166)

Shipments of D&H coal north over the Jefferson Branch and the A. & S. were outside the scope of the agreements reached between the D&H and the other companies in the coal "combination" in northeastern Pennsylvania. As such, the D&H was allowed to mine and ship all it could find market for in those markets since those sales would not interfere with the sales of the other members of the combination. As such, during the summer of 1876, it was announced in the *Carbondale Leader* of April 16, 1876, that the D&H would ship north over the Jefferson Branch and the A. & S during the coming summer more coal than it had shipped north in any one season heretofore. Here is that announcement:

"During the coming summer the D. & H. C. Co. will ship a larger amount of coal north over the Jefferson Branch and A. & S. roads than it has done in any one season heretofore. The coal shipped over these roads goes to points where there is no competition with the other great companies which form the combination to keep up the price of coal. The D. & H. C. Co. is allowed to mine and ship all it can find market for at those markets where they do not interfere with the other members of the combination." (*Carbondale Leader*, April 16, 1876, p. 3)

The first coal brick made by the D. & H. Canal Company's new machine for making coal bricks was made on May 12, 1876. These bricks are to be used for railroad fuel and steam engines. Here is the announcement that was placed in the *Carbondale Leader* of May 13, 1876 about these coal bricks:

"The first coal brick made by the D. & H. Canal Company's new machine for compressing coal dust into combustible material, was turned out yesterday afternoon, and is now on exhibition at the Mansion House. The bricks are about ten by six inches, and three and half thick, and contain ten per cent of pitch. These bricks are to be used for railroad fuel and steam engines, and will effect a great saving, as they are made of refuse material.--*Rondout Freeman.*" (*Carbondale Leader*, May 13, 1876, p. 3)

On Friday morning, November 10, 1876, James Clarkson, Mining Engineer of the Delaware and Hudson Canal Company for 22 years, died. It was James Clarkson and his good friend James Archbald who discovered coal in Archbald in 1843. In that same year, at Archbald, the White Oak mine was then opened and the D&H Gravity Railroad extended there.

An interesting article about the long friendship of James Clarkson and James Dickson (father of D&H President Thomas Dickson), titled "James Dickson and James Clarkson" was written by "W. W. C." when he learned of the passing of James Clarkson. That article, which was published in the *Cherry Valley, NY, Gazette*, was reprinted in the January 13, 1877 issue of the *Carbondale Advance* on p. 3. Here is that very interesting and very touching article about these two venerable Scotchmen:

"James Dickson and James Clarkson. / A summer or two ago there came to my house for a short visit, two venerable men from Carbondale, in the Lackawanna valley in Pennsylvania, James Dickson and James Clarkson. A letter received a few days since announced the death of the latter, Mr. Clarkson, and it brought to my mind a vivid recollection of these two excellent friends. They were inseparable friends. Mr. Dickson is the father of Thomas, President of the Delaware & Hudson, and he is also of Geo. L., the President of the Dickson Manufacturing Company, one of the largest of the Pennsylvania companies. Both he and his life-long friend Clarkson were natives of Scotland. Both for nearly fifty years had been connected with the Delaware and Hudson Company in its machinery and mining interests and had seen its growth almost from its beginning to its vast proportions. Both had retired from active employment, and with a competency of this world's goods. And now far advanced in life, both of them verging on four score years, with intellectual faculties but little abated, they were tranquilly awaiting the end of their journey. / No aged husband and wife could have been more devoted to each other. For many a wintry day they had trod with one another, and hand in hand they were descending the hill of life. Every day they met together, and one listened while the other read. So much by way of introduction. One pleasant summer evening the old gentlemen were sitting in my hall communing and perhaps musing as they thought of the long past, / 'Recalling with a sigh / 'Dim recollected pleasures of the days of youth / 'And early love,' when the drone of the Scottish bagpipes was heard; our fellow-townsman, James Braik, in his full Highland costume, with a companion came upon the piazza, he playing on his pipes the favorite Scottish air 'The Campbells are coming.' It was a serenade to the old Scottish gentlemen and to them both was extremely gratifying and interesting. As the piper continued to play the airs of Scotland, tears trickled down the cheeks of the old Scotchmen they constantly saying that nothing had touched their feelings more since they had left their native land so many years ago. / The whole scene was the more touching, from the fact that Mr. Braik an Aberdeenshire man in his Highland dress wore the plaid of the Gordons. Mr. Dickson could hardly restrain himself as he recalled the fact that in that garb, as a member of the regiment of the Gordon Highlanders, his father had fought through the continental wars under Wellington, closing his military career at the battle of

Waterloo, whose medal he wore. I was an intensely interested spectator, and will not soon forget that summer evening. And now the twain are severed. One has been taken and the other left. But thanks to a good Providence the survivor is a brave Christian soldier. W. W. C." (*Carbondale Advance*, January 13, 1877, p. 3)

Part 4 of P. S. Joslin's article titled "CARBONDALE IN ITS INFANCY / A Series of Articles on the Early Days of The Anthracite city by One of Its Pioneers" is about James Clarkson, who emigrated to America from Scotland in 1830 and became, ultimately, the mine superintendent for the D&H. Here is that article, as published in the *Carbondale Leader*, August 26, 1899, p. 6:

"James Clarkson emigrated from Scotland in 1830 and came to Philadelphia. In Scotland he had been the overseer of a gentleman's landed estate, but believing the United States had greater room for a young man to grow, his ambition prompted him to leave the heather and bluebells of his naïve land and seek his fortune on this side of the Atlantic. / On his arrival in Philadelphia he engaged himself to Peter Graham to take charge of his lands in the vicinity of Dundaff. Not feeling satisfied with his situation there, he gave it up and came to Carbondale. He and Peter Campbell went to dealing in cattle and butchering. Soon afterward they took the contract of the D. & H. Canal company, to mine coal, employing their own men, and working several chambers. The foreman or mine boss not proving satisfactory Mr. Clarkson entered the mine himself to superintend the work. Mr. Archbald believing that Mr. Clarkson would be a valuable acquisition, made him mine superintendent for the company which position he occupied for about thirty years. [emphasis added] / Mr. Clarkson was a noble specimen of a Scottish gentleman, standing about six feet two inches high, and weighing over 200 pounds, of his ability as a mine superintendent his long continuance in the company's employment speaks for itself. When Mr. Archbald resigned his position as general superintendent, Mr. Clarkson also gave up his position. Beside his inside work, he had an oversight over much of the outside work. If any accident or damage happened anywhere, I have heard it spoken of him, as if by intuition, after viewing the work he would place the blame unerringly where and upon whom it belonged. / Although he was of a stern nature, exacting from everyone what was their duty to do, yet socially he was a very pleasant and kind man. When the writer was alderman and any suit was commenced by any miner or laborer in the mines, of a criminal nature, like assault and battery, or surety of the peace, if he learned of it he would stop their cars until they settled it and bought a statement from the alderman to that effect. / In his position as superintendent he had opportunities of securing fine specimens of fossils, which he utilized by exchanging with other collectors or possessors of minerals until he probably had the largest and most varied and valuable collection of any single individual in the United States. During the war of the Rebellion he sent his collection to New York and gave it to the sanitary commission who sold it for \$1,000. [emphasis added]. / In his life time he accumulated a handsome competence, and for several years after his resignation

from the company's employ lived a life of leisure. He was a great reader, and enjoyed the foreign quarterlies very much. He and Alexander Bryden co-superintendent for the company were instrumental in inaugurating a circulating library association, where only American and Foreign monthlies and quarterlies were used. He died November 10, 1876, at the age of seventy-seven years. / Mr. Clarkson had two children, Edward, who is now a resident of Carbondale and Jemima, who married John Love, both of whom are now dead. One daughter, Margaret Love, still survives, making her home in Brooklyn, N. Y., during the winter, and in summer at her cottage in Benton township, this county."

In Joslin's biographical portrait of James Clarkson given above, he mentions James Clarkson's fossil collection. About that collection, we read the following in the biographical portrait of Edward Clarkson (son of James Clarkson) in *Portrait and Biographical Portrait of Lackawanna County Pennsylvania*, pp. 200-201:

"During his connection with the mines, James Clarkson made one of the largest and most interesting private collections of fossils in the world. This he sold to the Smithsonian Institute at Washington for \$10,000 and it is now on exhibition there. The sale was made during the Civil War and the sum received was donated by him to the relief of the soldiers in the fields and hospitals." (*Portrait and Biographical Portrait of Lackawanna County Pennsylvania*, Edward Clarkson biography, pp. 200-201)

Here is the first of two obituary notices that was published in the *Carbondale Advance* on the day following James Clarkson's death, on Friday, November 10, 1876:

"DEATH OF JAMES CLARKSON, ESQ. / An Old Landmark Gone. / We regret this week to be obliged to chronicle the death of one of the pioneers of our town and of the Lackawanna Valley, JAMES CLARKSON, Esq., who departed this life at nine o'clock this (Friday,) morning. As is well known Mr. Clarkson was one of the early settlers of this town, and for many years connected with the Delaware and Hudson Canal Company; and to his discretion and honest management in those early days much of the after prosperity as well as early success of the corporation was due. For many years he has been in poor health from a pulmonary difficulty, and finally at nine o'clock this morning breathed his last at his residence on Smith Street in this city at the ripe old age of seventy-seven years. Obituary next week. / The funeral will take place from his late residence on Smith street, Sunday afternoon at 2 o'clock." (Carbondale Advance, November 11, 1876, p. 3)

On November 18, 1876, the second of the two articles about James Clarkson and his death that were published in the *Carbondale Advance* was published. Here is that article:

"James Clarkson, / Whose death was briefly announced in last week's Advance, was born in Edinburgh, Scotland, on the 4<sup>th</sup> day of July, 1799. He was originally intended by his family for one of the liberal professions—that of the ministry of the Scottish Kirk—and his early studies were directed in a measure to that end; but he soon relinquished that idea, for his tastes and predilections were more in accordance with science than theology. When he was about 14, he attracted the attention of Lord Hermond who possessed large landed estates near Edinburgh. Lord H. took him into his employ and placed him under the tuition of his chief agricultural manager, and thus he made himself practically familiar with the science of farming. With Lord Hermond he lived many years in an important capacity, acting as his principal manager, attending cattle fairs, buying and selling cattle in large numbers, &c. When about 30 years of age he left Lord Hermond's employ and emigrated to the United States, landing in the year 1829. / Soon after coming to this country he made arrangements with the late Peter Graham, Esq., of Philadelphia, to take charge of his farm near Dundaff. Here he remained only about a year or so and came to Carbondale in the spring of 1831. He began his career here by taking a contract in the mines of the Del. & Hud. Canal Company, employing a number of men to carry on the work. While so engaged he came frequently in contact with James Archbald, Esq., then, and for many years thereafter, General Superintendent for the D. & H. Canal Company. Mr. Archbald with that rare sagacity and practical judgment which he possessed in so eminent a degree, soon saw in Mr. Clarkson the necessary qualifications to fit him as his assistant in the management of the mining department. The position of mining engineer was offered him by Mr. Archbald, and accepted at a very moderate salary. In this capacity he served the company for some 22 years, Mr. Archbald and himself resigning their respective positions on the 1<sup>st</sup> day of January, 1854, after which and during the rest of his life he devoted himself for the most part to his private affairs. During the greater part of his life he enjoyed sound and vigorous health, but for the last few years his friends noticed with sadness its gradual decline and at last the end came, and he quietly passed away on Friday morning, the 10<sup>th</sup> inst., at the ripe age of 77 years, 4 months and 6 days. / Such is an outline, in brief, of the life of Mr. Clarkson. But it may be interesting perhaps and instructive to look a little more closely at the details of the life of our respected friend. His life was very intimately connected with the history of our town. When he first came to Carbondale, our present city of some 10,000 or more inhabitants was little more than a village in its infancy, containing a population of less than 1,000 all told. Its business was correspondingly small; the production of coal in the year 1830 being only some 43,000 tons. This meager amount when compared with the very great increase which it subsequently attained was hardly prophetic except to the far-seeing minds of that day, of what it was destined to become. Mr. Clarkson was identified with it all. In all its struggles for life and its various discouragements in the early years to its final triumph he was an earnest worker and helper. The business was new to him as with others; he was one of its pioneers; they had to learn it by experience. He devoted himself industriously and energetically to the mastering of its details, and made himself familiar by study with the principles of Geology in their application to coal formations. He was naturally well fitted in many important respects for his position. He was characteristically, with his countrymen, careful and cautious to a large

degree, and a very economical and prudent manager. Every man under him must be a faithful worker, no idle drones were for a moment; tolerated by him. He, himself was a hard worker, always first on the ground in the morning and the last to leave at night, and it is not too much to say that the great success and commanding position of the D. & H. C. Co. were largely owing to the able management of those two faithful men, James Archibald and James Clarkson, neither of whom could be called a brilliant man, nor were they men of bold and daring enterprise. Their superiority as managers lay in their untiring industry, perseverance and economy, plain, practical common sense and sterling integrity [emphasis added]. They secured the confidence and respect of the employees of the company by their uniform kindness, and the faithful performance of all promises made them. Their word was final and conclusive. These two excellent men worked harmoniously together; they entertained a high mutual respect and their friendship only ended by the death of Mr. Archbald seven years since. Mr. Clarkson remarked to an intimate friend within a few years 'that taking him all in all Mr. Archbald was the best man he ever knew.' They had many traits of character in common, some of which have already been alluded to and there were differences also. Mr. Archbald was constitutionally mild and quiet and reserved. Mr. Clarkson was in the most active period of his life, somewhat austere and stern and unapproachable, excepting to those whom he received to his confidence and esteem. With such he was always very sociable and affable. But as he advanced in life his austerity wore off; time had a mellowing and softening effect on his character. The distinguishing characteristic of Mr. Jas. Clarkson through his whole life, was perhaps his sense of justice. He had a high sense of honor and bitterly denounced meanness and dishonesty in all their forms. He was, too, a man of generous and tender sympathies, thoroughly loyal to the country of his adoption, and during the whole period of the war of the Rebellion he took a very active interest until its successful close, and no one rejoiced more than he when peace was restored. / Mr. Clarkson was a man of sound judgment, an independent, but slow and careful thinker. Opinions once formed; he adhered to with great tenacity, perhaps indeed to a fault. His mind was always receptive to new truth, and he was much interested in all new discoveries in any department of human knowledge. He took especial interest in the labors and investigations of the distinguished scientists, Darwin, Huxley and that school of philosophers, waiting for and gladly receiving any new truth as it was unfolded. In respect to his religious views we may confine ourselves to the simple statement that he had the most profound belief in the existence of a great first cause of infinite wisdom, power and goodness. He saw the divine attributes in everything in nature. The illimitable universe or the formation of crystal were to him equal proofs positive of an infinite superintending intelligence. As to a distinct individual existence in another life he was not so clear. With him it was a matter of hope rather than of positive belief. In any event he knew all would be for the best and was willing 'to wait the great teacher, death,' to solve all difficulties." / The funeral of Mr. Clarkson was attended at his late residence, on Smith street, on Sunday afternoon, 12<sup>th</sup> inst. The services were conducted by the Rev. E. D. Bryan of the Presbyterian church. A very large attendance attested the respect and [word missing in original], not only of our own citizens, but that of other

towns in the Valley. By direction of President Dickson, of the Del. & Hud. C. Co., a special train was run from the Dickson Works in Scranton to this city, returning after the services. About three hundred prominent citizens from Pittston, Scranton, Providence, Olyphant and Archbald availed themselves of the opportunity afforded. G. R. Love, Esq. of New York city, and family, were also in attendance. / Deceased leaves a considerable estate, but no will. His heirs are his son, Edward Clarkson, and his grand-daughter, Miss Maggie C. Love, both of this city." (Carbondale Advance, November 11, 1876, p. 3)

James Clarkson was one of the original Directors, and later Vice President, of the Carbondale First National Bank. Here is a photographic copy, by Doug Goodrich, of the original portrait of James Clarkson that is presently in the holdings of the Carbondale Historical Society and Museum:

## Portrait of James Clarkson, 1799-1876:



James Clarkson, 1799-1876

Following the death of James Clarkson in 1876, his son, Edward, was named a Director of the Carbondale First National Bank, to become later the fifth president of the bank. Here is a photograph, by Doug Goodrich, of the portrait of Edward Clarkson that is in the collection of the Carbondale Historical Society and Museum.

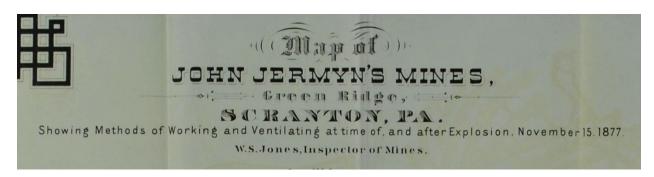
## Portrait of Edward Clarkson:



Edward Clarkson, 1831-1920

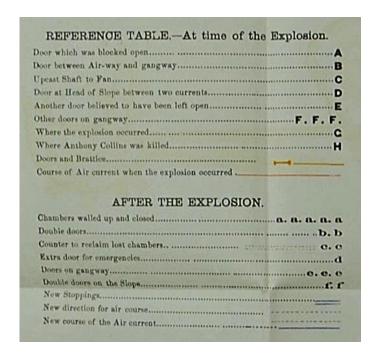
On November 15, 1877, Anthony Collins was killed in an explosion in John Jermyn's mines at Green Ridge, Scranton, PA. In the course of the investigation that followed the accident, the extraordinary map shown below of those John Jermyn mines was produced. We have not yet learned any details about the accident or the investigation of the accident that followed. We are very pleased to have, nevertheless, this extraordinary map on which is shown the layout of these John Jermyn mines at Green Ridge:

Detail, showing the title information on the map, the scale of which is 100 feet to an inch:

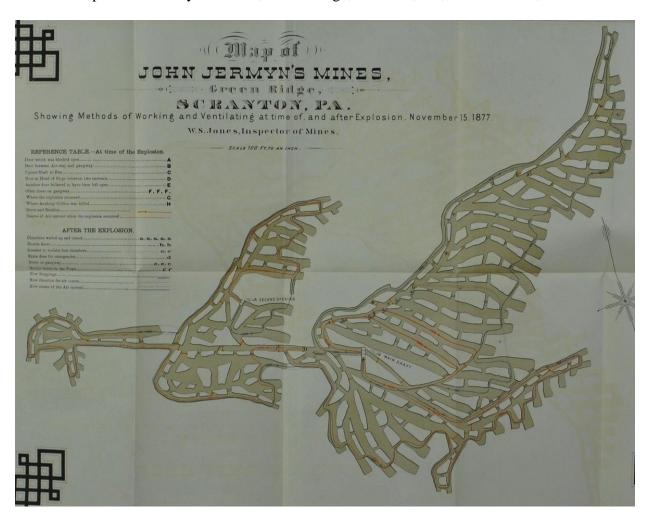


Here is a detail of the map, showing the REFERENCE TABLE that is given in the upper left corner of the map:

"REFERENCE TABLE, At time of the Explosion. / AFTER THE EXPLOSION.":



Here is a map of John Jermyn's Mines, Green Ridge, Scranton, PA, November 15, 1877:



The following announcement about the Coal Brook mines and the mines at No. 1 and No. 3 was published in the *Carbondale Advance* of January 4, 1879:

"Coal Brook mines are idle this week, and No. 1 and No. 3 in operation." (*Carbondale Advance*, January 4, 1879, p. 3)

In the March 29, 1879 issue of the *Carbondale Advance*, it was announced that the health of John Campbell, Esq., D&H mining boss for nearly 30 years, and one of the Sunday School directors of the city of Carbondale, was now improving. Here is that announcement:

"John Campbell, Esq., mining boss of the D. & H. C. Co., for nearly 30 years, and one of the School Directors of the city has been seriously ill. We are glad to learn that the symptoms are now encouraging." (*Carbondale Advance*, March 29, 1879, p. 3)

In 1853, at the age of 73, James Douglass accepted the position of weighmaster at one of the mines of the Delaware and Hudson Canal Company, and served the D&H with great faithfulness for thirteen years. On Tuesday, April 29, 1879, he attained the age of 100 years, and a day-long reception was held at the residence of his daughter and son-in-law, Mr. and Mrs. Robert Maxwell, on Dundaff Street. The following portrait of James Douglass and account of the reception that took place in Carbondale on his 100<sup>th</sup> birthday was published in the *Carbondale Advance* of May 3, 1879, p. 3:

"Mr. James Douglass—Our much respected Centennarian. / Our venerable neighbor and friend, James Douglass, Esq., on Tuesday of this week, April 29<sup>th</sup>, attained the age of 100 years. He has for some years resided with his daughter and son-in-law, Mr. and Mrs. Robert Maxwell on Dundaff street, and on that day the doors of their hospitable and pleasant residence were thrown open, that he might receive the congratulations of his friends. Hundreds of our best citizens embraced; the opportunity, and there were even considerable delegations from Archbald, Scranton, Wilkes-Barre, Binghamton and other towns. The opportunity of shaking hands with a friend on the day that he attains to the age of one hundred years, is a very rare one, and the desire to enjoy the privilege seemed to be a general and spontaneous impulse. The calling was informal, and extended throughout the entire day, but the rooms were at some times pretty well crowded, and ice cream and other refreshments were freely enjoyed. / The recipient of these pleasant and deserved attentions, Mr. Douglass, has always enjoyed very largely the love and respect of his neighbors, and is still smart and active, and enjoys his accustomed walks about town with a keen relish. An amusing incident occurred during the reception. He was surrounded by a group of friends among whom were two of our best physicians. The very natural, and proper question, was asked 'How he had kept in such good health so long?' 'Ah!' he replied, 'I have kept away from the doctors.' / Mr. Douglass [Great Scot] was born at Wysha, Scotland, April 29<sup>th</sup>, 1779, during the period of our Revolutionary War. He was educated in the excellent schools of that country which make a good education almost universal, and during his minority learned the trade of a slater. He followed that business in the cities of Glasgow, Paisley, and other towns, during the entire period of what is usually considered 'the prime of life.' Forty-five years ago, when 55 years of age, he emigrated to America, having previously purchased a farm in Clifford, Susq. Co., about one mile North of McCalla's Mills [now called Elkdale]. The family landed in New York, April 26<sup>th</sup>, 1834, and proceeded at once to their new home, about 10 miles from Carbondale, which was then an infant town, about six years old. He cultivated his farm about 18 years, until the year 1852, when he decided to remove to Carbondale, and accept the position of weighmaster at one of the mines of the D. & H. C. Co. He was then 73 years of age, but officiated as weighmaster with great faithfulness for 13 years. When he attained his 86<sup>th</sup> year, 14

years ago, he resigned his position and gave up active business. / Mr. Douglass had three sons and seven daughters, of whom only Mrs. Maxwell, and Mrs. Forrester, both resident here, survive. His great grandchildren are very numerous. Mrs. Maxwell has 29 grandchildren. His family connections in Scotland have been very long lived. He states that a grandfather of his, attained to the age of 108 years. / He has long been a devoted member of the Presbyterian Church, and for many years an elder in the First Presbyterian Church of this city. He is man of firm, strict principles, and a remarkably kind and equable temper. Having been born in Scotland, he always felt that he must be loyal to the crown of England, and would never consent to take out naturalization papers and or forswear his allegiance. But when the Southern Rebellion broke out, he was sorely tried, and although over 80 years of age, felt a strong desire to join the Union army. / On the reception day an autograph album was within reach of the callers, and although it escaped the attention of multitudes, it is pretty well filled, and will be a valuable keepsake. / We have not space to give the names, only to say, that among those registered from Scranton are the following: Mr. and Mr. G. L. Dickson, Mr. and Mrs. John R. Fordham, Hon. R. H. McCune, W. B. Culver, J. M. Chittenden, Townsend Poore, Laton S. Oakford, and H. B. Phelps. /The occasion has been one of much interest to the parties concerned, and to the people of our town, and it would be a pleasure to extend this article, if time and space permitted. / Our readers all, will wish that it was not so very rare to be enabled to greet valued friends on their hundredth birth day." (Carbondale Advance, May 3, 1879, p. 3)

On Wednesday, June 1, 1881, Charles Gilgllon, a miner, fell accidentally on the mine needle that he had in his hand, and the needle ran through his body, passing through his right side, and taking an upward course, gong through his liver, diaphragm, and right lung, and the point coming out at his back. A boy working nearby, seized hold of the large end of the needle and pulled it out. Remarkably, Gilgallon was not killed by the accident. Here is the account of this accident that was published in the *Carbondale Leader:* 

"A SINGULAR ACCIDENT. / A rather singular accident occurred to a miner working in Erie Shaft, whose name is Charles Gilgallon, this week. One of the tools used by the miners is called a 'needle.' It is a piece of steel about two feet in length and three-eights of an inch in thickness, which near one end tapers to a point. They use it to keep communication open to the powder which is tamped into the end of a drill hole that is made to blast loose the coal. After the powder is tamped, this is inserted, and the rest of the hole filled with dirt until it is packed as close as possible. Then when the 'needle' is withdrawn, it leaves a small hole which can be filled partly with powder and lastly a short piece of fuse. In the case of Gilgallon he had prepared the blast properly and lighted it. As he was running to a place of safety, still holding the 'needle' in his hand, he fell and ran it through his body. It passed through his right side, taking an upward course, going through his liver, diaphragm, and right lung, the point of it coming out at his back. A boy who was working there seized hold of the large end of the needle and pulled it out by

main force. The man was taken out and the assistance of a surgeon immediately procured. Strange to say, Dr. Burnett, who has charge of the case, says that it is a question whether the man, who is yet living, is mortally hurt." (*Carbondale Leader*, June 3, 1881, p. 4)

Here is the account of the accident that was published in the Carbondale Advance:

"Dangerous Accident. / Charles Kilgannon, employed in the Erie Mines, two miles below town, met with a fearful accident on Wednesday. He had lighted his fuse in the mine and was hurrying away from it, with his mine needle in his hands, when the needle struck some obstruction and was driven into and through his body, about the chest, piercing the vitals. His physician, Dr. Burnett, informs us the needle passed through the liver and lungs and came out under the shoulder blade, on the back. But he is still living, and seems to be pretty comfortable. He has no fever or inflammation as yet. Dr.'s theory is that the puncture was made by an instrument so sharp at the point and so smooth, that there was very little cutting or tearing of the vitals and they immediately closed up after the wound, and that there might be but little inflammation." (Carbondale Advance, June 4, 1881)

An accident with a mine needle befell Phineas Gage, about whom an article ("Finding Phineas") was published in *Smithsonian*, January 2010, pp. 8-10. Here is that article:

# **Finding Phineas**

An accident with a tamping iron made Phineas Gage one of the most famous names in neuroscience. Now there's a face to go with it **BY STEVE TWOMEY** 

ACK AND BEVERLY WILGUS, collectors of vintage photographs, no longer recall how they came by the 19th-century daguerreotype of a disfigured yet still-handsome man. It was at least 30 years ago. The photograph offered no clues as to where or precisely when it had been taken, who the man was or why he was holding a tapered rod. But the Wilguses speculated that the rod might be a harpoon, and the man's closed eye and scarred brow the result of an encounter with a whale.

So over the years, as the picture rested in a display case in the couple's Baltimore home, they thought of the man in the daguerreotype as the battered whaler.

In December 2007, Beverly posted a scan of the image on Flickr, the photo-sharing Web site, and titled it "One-Eyed Man with Harpoon." Soon, a whaling enthusiast e-mailed her a dissent: that is no harpoon, which suggested that the man was no whaler. Months later, another correspondent told her that the man might be Phineas Gage and, if so, this would be the first known image of him.

Beverly, who had never heard of Gage, went online and found an astonishing tale.

In 1848, Gage, 25, was the foreman of a crew cutting a railroad bed in Cavendish, Vermont. On September 13, as he was using a tamping iron to pack explosive powder into a hole, the powder detonated. The tamping iron—43 inches long, 1.25 inches in diameter and weighing 13.25 pounds—shot skyward, penetrated Gage's left cheek, ripped into his brain and exited through his skull, landing several dozen feet away. Though blinded in his left eye, he might not even have lost consciousness, and he remained savvy enough to tell a doctor that day, "Here is business enough for you."

"Here is business enough for you," Gage (left) told the first doctor to treat him after a premature detonation on a railroad-building site turned a tamping iron into a missile.

Gage's initial survival would have ensured him a measure of celebrity, but his name was etched into history by observations made by John Martyn Harlow, the doctor who treated him for a few months afterward. Gage's friends found him "no longer Gage," Harlow wrote. The balance between his "intellectual faculties and animal propensities" seemed gone. He could not stick to plans, uttered "the grossest profanity" and showed "little deference for his fellows." The railroad-construction company that employed him, which had thought him a

model foreman, refused to take him back. So Gage went to work at a stable in New Hampshire, drove coaches in Chile and eventually joined relatives in San Francisco, where he died in May 1860, at age 36, after a series of seizures.

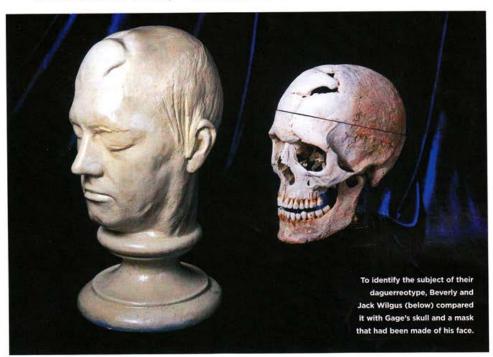
In time, Gage became the most famous patient in the annals of neuroscience, because his case was the first to suggest a link between brain trauma and personality change. In his book An Odd Kind of Fame: Stories of Phineas Gage, the University of Melbourne's Malcolm Macmillan writes that two-thirds of introductory psychology textbooks mention Gage. Even today, his skull, the tamping iron and a mask of his face made while he was alive are the most sought-out items at the Warren Anatomical Museum on the Harvard Medical School campus.

Michael Spurlock, a database administrator in Missoula, Montana, happened upon the Wilgus daguerreotype on Flickr in December 2008. As soon as he saw the object the one-eyed man held, Spurlock knew it was not a harpoon. Too short. No wooden shaft. It looked more like a tamping iron, he thought. Instantly, a name popped into his head: Phineas Gage. Spurlock knew the Gage story well enough to know that any photograph of him would be the first to come to light. He knew enough, too, to be intrigued by Gage's appearance, if it was Gage. Over the years, accounts of his changed character had gone far beyond Harlow's observations, Macmillan says, turning him into an ill-tempered, shiftless drunk. But the man in

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## "There's writing on that rod!" he said. And part of it seemed to read, "through the head of Mr. Phi..."



the Flickr photogragh seemed welldressed and confident.

It was Spurlock who told the Wilguses that the man in their daguerreotype might be Gage. After Beverly finished her online research, she and Jack concluded that the man probably was. She e-mailed a scan of the photograph to the Warren museum. Eventually it reached Jack Eckert, the public-services librarian at Harvard's Center for the History of Medicine. "Such a 'wow' moment," Eckert recalls. It had to be Gage, he determined. How many mid-19th-century men with a mangled eye and scarred forehead had their portrait taken holding a metal tool? A tool with an inscription on it?

The Wilguses had never noticed the inscription; after all, the daguerreotype measures only 2.75 inches by 3.25 inches. But a few days after receiving Spurlock's tip, Jack, a retired photography professor, was focusing a camera to take a picture of his photograph. "There's writing on that rod!" Jack said. He couldn't read it all, but part of it seemed to say, "through the head of Mr. Phi . . . "



In March 2009, Jack and Beverly went to Harvard to compare their picture with Gage's mask and the tamping iron, which had been inscribed in Gage's lifetime: "This is the bar that was shot through the head of Mr. Phinehas P. Gage," it reads, misspelling the name.

Harvard has not officially declared that the daguerreotype is of Gage, but Macmillan, whom the Wilguses contacted next, is quite certain. He has also learned of another photograph, he says, kept by a descendant of Gage's.

As for Spurlock, when he got word that his hunch was apparently correct, "I threw open the hallway door and told my wife, 'I played a part in a historical discovery!"

STEVE TWOMEY is based in New Jersey. He wrote about map and document thieves for the April 2008 issue of SMITHSONIAN.

View more items from the collection of the Anatomical Museum at Smithsonian.com/warren

In February 2010, we wrote to the editor of *Smithsonian* to report that a similar accident had befallen Charles Gilgallon (possibly Kilgallon) in Carbondale in 1881. Here is that letter (sent to "LettersEd@si.edu" on 02-25-2010, together with a copy of the clipping from the June 3, 1881 issue of the *Carbondale Leader* about Charles Gilgallon).

"02-25-2010 / To the Editor: / An accident similar to the one that happened to Phineas Gage took place in Carbondale, PA in 1881 to Charles Gilgallon, an anthracite coal miner. As Gilgallon was running to a place of safety, having prepared a blast in the mine in which he was working, he fell and his NEEDLE, as the miners called them, passed through his right side, in an upward course, going through his liver, diaphragm, and right lung, and came out his back. Gilgallon, remarkably, like Gage, lived through the ordeal."

In a classic demonstration of parochialism and poor editorial management, *Smithsonian* did not even acknowledge receipt of our communication, let along publish the *Letter to the Editor* in an issue of their magazine.

In November 1881, the D. & H. Canal Company announced that rebates of 45 cents on each ton of pea coal would now be offered to all customers, no longer, as previously, only to employees of the company. Here is that announcement:

"The D. & H. C. Company have reduced the price of pea coal to local consumers from \$1.95 to \$1.50 per ton. Heretofore a discrimination has been made between employes of the company and other citizens; the former being allowed a rebate of 45 cents on each ton. Now all purchasers are put on the same footing." (*Carbondale Leader*, November 4, 1881, p. 4)

In the September 2, 1882 issue of the *Carbondale Advance*, it was announced that six companies, including the Delaware and Hudson Canal Company, would suspend mining on the 31<sup>st</sup> of August and the 1<sup>st</sup>, 2d, 7<sup>th</sup>, 8<sup>th</sup>, and 9<sup>th</sup> of September. Here is that announcement:

**"Half Time.** / The following companies have agreed to suspend mining on the 31<sup>st</sup> of August and the 1<sup>st</sup>, 2d, 7<sup>th</sup>, 8<sup>th</sup>, and 9<sup>th</sup> of September: The Philadelphia and Reading Company, the Lehigh Valley Company, the Pennsylvania Coal Company, The Delaware and Hudson Canal Company, the Delaware, Lackawanna and Western Company, and the New Jersey Central." (*Carbondale Advance*, September 2, 1882, p. 2)

From a remarkable article that was published in the *Carbondale Leader*, April 13, 1883, p. 3, we learn that there is a strong bond that binds miners and their families together, especially at those times when a miner is killed in the mines. Here is that article:

"COAL MINERS. / How They Provide for the Widows and Orphans.—Marrying Out of Generosity. / A correspondent writing from Wilkesbarre, Pa., says: Accidents in the collieries of the middle district of the anthracite coal fields, of which this city is the center, made last year nearly one hundred widows and over five hundred orphans. But notwithstanding the frequency of fatal accidents and the absence of any organized charity, the larders of the widowed families are never empty, none go naked, the household fires are not extinguished and the little home is never stripped by a landlord's warrant. Kind hands see that food is provided each day, and the men returning from their work in the mines do not forget to carry to the widow's home a lump of anthracite for the next day's use. Communism in a peculiar sense prevails among the coal miners of Pennsylvania. The lucky divide with the unlucky as readily and as cheerfully as if they belonged to one family. However much all may quarrel on abstract questions of politics or religion, all discussions are dropped at the appeal of charity. / While, as has been said, no organized relief societies exist among the colliers, there is a general system in vogue which does its work well and promptly. Every printing office in this region is visited weekly be persons wanting raffle tickets. These tickets cost one dollar a hundred, and are headed 'Raffle for a cooking stove,' or clock, bureau, quilt, table, or some other article of domestic use. It is announced that the raffle is for the benefit of a widow or injured miner, and on the 'night after pay day.' The price of the ticket is generally fifty cents. The raffle is in charge of a committee whose names appear on the ticket. Take the case of a woman for instance, lately made a widow. She has been left penniless, as miners' widows usually are. Everybody understands this, and the hundred tickets are promptly disposed of among the miners, who pay for them on pay day. On that night the widow gets \$50 cash. The night of the raffle comes, and, possibly, one-fifth of the ticket holders assemble. A fiddler, a keg of beer, and a little 'hard shtuff' form the elements of the entertainment. The young lads join in a dance with the lasses, the old men sup and smoke their pipes, and the old women recount the virtues of the deceased miner. About midnight the raffle begins. The names of the ticket purchasers are put into a hat and well shaken. Whoever secures the prize at once turns it over to the beneficiary. The company breaks up happy over the good time they have had, and the kind deed they have done. The \$50 goes a long way in keeping the shadows from the little house. It will sometimes pay a whole year's rent, and it only requires one or two more raffles to keep the victor's [possibly 'victim's'] poor larder stocked, for it must be understood that potatoes, cabbage, and meal, form the staple articles of diet in these humble homes. / A year is a long time for a comely and thrifty woman to remain a widow at the mines, no matter how many children she may have. Jim is killed to-day, and possibly before the summer ends, Jack, who was Jim's best friend, insists upon marrying Jim's widow Jim's babies become his. And if you go below the surface you will find the foundation of Jack's action to be pure charity. It is a matter of record that when the terrible Avondale disaster occurred so many widows and helpless ones were left that the matter of caring for the former speedily was discussed. It was quickly settled by propositions of marriage, and within a very short time after the calamity the household of every victim was protected. This same spirit exists in every mining community to-day, and is a shield against much distress. / Efforts have been made from time to

time to induce the miners to abandon a custom that prevails among them. Whenever a man is killed in a mine while at work, every man in the colliery where the accident occurs stops work. Frequently 1500 employes turn out and remain out for two days. There appears to be a deep superstition that prompts that peculiar exhibition of respect for the dead." (*Carbondale Leader*, April 13, 1883, p. 3)

Two miners were killed in Connell's mines in Scranton on Tuesday, September 11, 1883. One of the men, Owen Coggins, was from Carbondale; the other man was David Jones of Wilkes-Barre. They were killed on their first day of work in these Connnell mines. Here is the notice about the accident that was published in the *Carbondale Advance* of September 15, 1883:

"Killed in the Mines. / A CARBONDALE MINER KILLED IN CONNELL'S MINES AT SCRANTON. / On Wednesday evening a telephone message was received in this city from Scranton inquiring for Owen Coggins, a miner of this city. The message stated that two men had been killed in Connell's mines in Scranton, one of whom was supposed to be Owen Coggins. Word was sent to Coggins' brother who resides on Dundaff street, and he answered the message by saying that Owen left this city on Monday to get employment in some of the mines at Scranton. / The other man who was killed was David Jones of Wilkes-Barre. Both men went to the mines where the accident occurred on Tuesday morning and applied for work. They were sent to an unworked chamber, where they were told they could work if they chose. Their mangled bodies were found in this place at about ten o'clock the same day by a miner who went there to load coal that he had blasted down the day previous. Their bodies were taken to the morgue at Lackawanna Hospital to await identification. / The top of Coggins' skull and forehead were so badly crushed as to be unrecognizable. One of the feet was smashed, the right arm was torn off, and the legs were broken. In his pockets were found \$11.85, a Louisiana Lottery ticket numbered 31,679, and a tobacco box. / The other man was not so badly mashed. The skull was crushed but the lower part of his face was not disfigured. / Coggins was a man of about forty years of age and unmarried. He lived by himself on Dundaff street and was an industrious man." (Carbondale Advance, September 15, 1883, p. 3)

A young man about 22 years, Frank Finnegan, in returning home from work at the Erie mines, attempted to board a train on the Gravity road and missed his footing and fell under the cars, injuring himself badly. Dr. Burnett, assisted by Dr. Gillis and Dr. Wheeler, had to amputate his left leg below the knee. Here is the account of the accident that was published in the *Carbondale Advance* of November 24, 1883:

**"Painful Accident.** / At about noon on Saturday last, Frank Finnegan, a young man about 22 years of age, met with a painful accident while returning from work at the Erie mines. He intended to take the afternoon train for Scranton to see Joe Murphy in 'Shaun Rhue,' and was

hurrying home for that purpose. When in the vicinity of No. 1 shaft he attempted to board a train on the gravity road, missed his footing and fell under the cars. His left leg below the knee was badly crushed and his right leg slightly bruised. He was taken in a very weak condition to the home of his sister in the Fourth Ward and Dr. Burnett summoned, who decided to amputate the crushed member. Accordingly, on Sunday morning the operation was performed by Dr. Burnett, assisted by Drs. Gillis and Wheeler. The young man has a large circle of friends who deeply regret his misfortune. He is improving as rapidly as can be expected." (Carbondale Advance, November 24, 1883, p. 3)

In 1883, about thirty million tons of anthracite coal was mined in the coal fields of Pennsylvania, with production for 1883 for the D&H up about 400,000 tons, even though there were more idle days in 1883 than in 1882. In the *Carbondale Leader* of December 28, 1883, we read:

"The coal tonnage of the D. & H. C. Co. for 1883 shows an increase over last year of about 400,000 tons; notwithstanding there have been more idle days this year than last. The whole output for 1883 is a trifle over 3,300,000 tons. The entire production of the Anthracite coal fields in Pennsylvania for 1883 is about thirty million tons; an increase over 1882 of over three million tons." (*Carbondale Leader*, December 28, 1883, p. 2)

In an undated newspaper article titled "The Celebrated Gravity Road" (probably published in the *Carbondale Leader* in the 1890s) in the archives of the Carbondale Historical Society, the author reports the following statistics: "Over this road about 2,000,000 tons of coal are hauled yearly. In the last 30 years the annual average has been about 1,800,000 tons. About the same amount is hauled over the locomotive road."

Here, from that clipping, are the statistics on tons of anthracite coal shipped by the D&H over the Gravity Railroad to Honesdale:

Tons of anthracite coal shipped:

1829, 7,000

1830, 43,000

1831, 54,000

1832, 84,600 (cholera epidemic)

1833, 111,777

1834, 43,000

1837 (A financial panic struck the U. S., triggered on May 10, when New York banks stopped making payments in specie. All financial panics are caused by false prosperity, over-production, and over-speculation.)

1838, 78,000

1840, 148,000

1845, 273,000

1850, 432,000

1855, 565,000 (1855-1860, depressed period, production stationary)

1860, 500,000

1865, 759,699

1866, 1,391,674

1874, 2,318,073

1875, 3,053,817

1883, 4,097,218

Working in the mines and on the railroad was a dangerous business, and everyone knew that it was, but the joy of life conquered the fear of death.

An entirely new make of mine lamp was offered for sale by Leonard Brothers, 514 Lackawanna Avenue, Scranton, in March, 1884. Here is there ad that was published in the *Carbondale Leader* of March 7, 1884:



Leonard Brothers offered for sale a wide variety of mining supplies and equipment.



Miners'
PATENT DRILLING
Machines,
Miners' Picks,
Pick Handles,
Shovels, Drills,
Wedges,
Needles.

Scrapers, Rakes, Miners' Wick in 10, 20, 100 and 200 lb. Bales, Miners' Squibs and Squib Boxes, Match Boxes, Miners' Oil Cans, all sizes, made in Tin and Galvanized Sheet Iron, Blasting Tubes and Wires, Miners' Waterproof Paper, Miners' Safety Lamps, Miners' Dinner Pails and Flasks.

SEND FOR PRICE LIST.

## LEONARD BROS.,

514 Lackawanna Ave.,

SCRANTON, PA.

During the first week of April, 1884, 14,475 cars of coal were sent over the Gravity Railroad from Carbondale to Honesdale. That was the largest week's work ever done on the Gravity. In the *Carbondale Leader* of April 11, 1884, we read:

"14,475 cars of coal passed over the gravity last week. Total number of tons, 65,137. This was the largest week's work ever done on the gravity." *Carbondale Leader*, 04-11-1884, p. 2

On April 10, 1884, another record was broken on the Gravity Railroad. On that day, No. 4 engine pulled 2,925 cars of coal up Plane No. 4, the largest number of cars ever pulled up that plane in one day. In the *Carbondale Leader* of April 18, 1884, we read:

"One week ago yesterday No. 4 engine pulled 2,925 cars of coal, the largest number of cars ever pulled in one day." *Carbondale Leader*, 04-18-1884, p. 2.

Two very interesting ads in the *Wilkes-Barre Evening Leader* of June 6, 1884: one from the Dickson Manufacturing Company, and one from The Hazard Manufacturing Company.

Wire Rope and Iron Works.

THE : DICKSON : MANUFACTURING : COMPANY.

CANAL STREET, WILKES-BARRE, PA.,

MANUFACTURERS OF

North Branch Canal

"Mining Machinery of all kinds." We have on hand a large stock of chute Plates, of the following thickness: 14, 14, 14 and 14 inches Also the following plain cylinder boilers: 30x30, 30x36, 34x30, 34x36 and 34x40.

### ALSO MINE SUPPLIES.

# THE HAZARD MANUFACTURING COMPANY,

Manufacturers 6.

Wire Rope was used extensively for moving coal cars on inclined planes.



Bridge Cable, Ship Rigging, Barbed Wire, Galvanized Telegraph Wire, Clothes Line.

Office and Warehouse: 87 Liberty Street, New York. Wilkes-Barre, Pa.

(Wilkes-Barre Evening Leader, June 6, 1884, p. 2)

#### **D&H Coal Shipped from the Mines, 1829-1884:**

The table shown below of D&H coal shipped from the mines for the period 1829-1884, from *Mathews*, pp. 246-247, is a treasure.

"The shipments of coal from the mines, for each year from the time the canal was opened to 1885, are exhibited in the following table, which is also suggestive of the slow but constant and comparatively uniform development of the company's prosperity:

| Years. | Tons.   | Years. | Tons.     |
|--------|---------|--------|-----------|
| 1829   | 7,000   | 1857   | 480,677   |
| 1830   | 43,000  | 1858   | 348,789   |
| 1831   | 54,000  | 1859   | 591,000   |
| 1832   | 84,600  | 1860   | 499,568   |
| 1833   | 111,777 | 1861   | 726,644   |
| 1834   | 43,700  | 1862   | 644,100   |
| 1835   | 90,000  | 1863   | 828,150   |
| 1836   | 103,861 | 1864   | 852,130   |
| 1837   | 115,387 | 1865   | 759,699   |
| 1838   | 78,207  | 1866   | 1,391,674 |
| 1839   | 122,300 | 1867   | 1,507,487 |
| 1840   | 148,470 | 1868   | 1,991,870 |
| 1841   | 192,270 | 1869   | 1,626,391 |
| 1842   | 205,253 | 1870   | 2,318,073 |
| 1843   | 227,605 | 1871   | 2,011,333 |
| 1844   | 251,005 | 1872   | 2,930,767 |
| 1845   | 273,435 | 1873   | 2,752,596 |
| 1846   | 320,000 | 1874   | 2,399,417 |
| 1847   | 386,203 | 1875   | 3,053,817 |
| 1848   | 437,500 | 1876   | 1,997,545 |
| 1849   | 454,240 | 1877   | 1,893,315 |
| 1850   | 432,339 | 1878   | 2,045,041 |
| 1851   | 472,478 | 1879   | 3,412,063 |
| 1852   | 497,839 | 1880   | 3,047,594 |
| 1853   | 494,327 | 1881   | 3,661,792 |
| 1854   | 438,407 | 1882   | 3,719,322 |
| 1855   | 565,460 | 1883   | 4,097,218 |
| 1856   | 499,650 | 1884   | 3,986,377 |

(*Mathews*, pp. 246-47)

#### **Tons of Coal Mined / Accidents and Deaths:**

The coal companies kept very good records. As such, they were able to determine how many tons of coal were mined per accident / per death. During the 19th century, is has been estimated that three miners were killed every two days. The first official casualty statistics were published in 1869, and in April of that year, Pennsylvania passed a mine safety law, under pressure from the newly formed miners' union, the Workingmen's Benevolent Association.

In 1875, (see the Hollister note immediately below), 7,947,861 tons of coal were mined in the Eastern District of the Wyoming Coal Fields. There were 102 accidents in the District during the year or one accident to every 77,588 tons of coal mined. The number of deaths, 62, shows one death to every 28,000 tons of coal mined.

Hollister, in his unpublished typescript/manuscript, pp. 165-167, presents statistics on mining and mine accidents/deaths that are available nowhere else. Significantly, he states (and we have enlarged the font size of his statement for emphasis):

"The mines of the Delaware and Hudson Canal Company in this district, have the best record of safe working of any coal mines in the world."

Here, then, is Hollister on the question for the period 1874-1878:

"It is rarely ever that the loss of human life incurred in the mining of coal is computed in calculating the cost of the anthracite industry and yet it will be seen that it is a very important item in the general outlay. The capitalist risks his money with fair prospects of a recompense; the miner risks his life daily for a poor pittance. The amount expended by the former is always taken into account, that of the latter never thought of on the mart or anywhere, except in the humble home where a widowed wife and oftentimes a helpless family are left to struggle in poverty. / In 1875, 7,947,861 tons of coal were mined in the Eastern District of the Wyoming Coal Fields. There were 102 accidents in the District during the year or one accident to every 77,588 tons. The number of deaths 62, shows one death to every 28,000 tons and the number of widows—36—leaves one widow to every 219,833 tons and there is an orphan to every 67,068 tons mined. / The amount mined by the different Companies in the District during the year is as follows:

|                             | Tons      |
|-----------------------------|-----------|
| D&H Company                 | 1,431,838 |
| D.L. & W. Company           | 1,175,169 |
| Pennsylvania Company        | 1,627,966 |
| Others mines below Scranton | 1,205,312 |
| Others mined above Scranton | 1,499,857 |

And there is an estimate of 24,000 tons for local sales. There are employed in the District 17,552 men and boys, 2,103 mules and 9,867 coal cars. The amount of coal used in and around the mines to furnish steam power to breakers, mines, fans and furnaces during the year is 291,419 tons and there were sold to 13,000 miners 156,000 tons.

There are laid in the mine 191 miles of headings or gangways, and 181 miles of air ways. There are laid in the mines 113 ¾ miles of 'T' iron, and 119 ¾ of strap iron track. Outside the mines leading to and from the breakers, there are laid 45 miles of 'T' iron, and 12 1/5 of strap iron track. / The death rate as compared with other districts during the year 1876 is comparative small taking into account the immense quantity of coal shipped from this vicinity. / Of the deaths twelve were caused by the cars, ten by premature explosions, eighteen by fall of roof, eleven by fall of coal, one by powder explosion, one by a falling trestle, two by being caught in machinery, one by falling down a shaft, three by an explosion of fire-damp, one by being caught between the 'pony rollers' and one by being struck by a carriage. / The youngest of this number was 15, the oldest—Noah Morgan—was 72 years of age; the ages of the remainder varying between twentyone and fifty. /. The total number of casualties is 164, which taken into consideration the quantity of coal mined is comparatively slight compared with 1874 when the casualties were 158, of which 69 resulted fatally. This considering the fact, that one million and one-half more tons of coal were mined in 1875 than in the year previous shows an improvement in the matter of precaution in working the mines, worthy of encouragement. Any steps taken with a view to lessening the death rate, and the long list of accidents that occur annually in pursuit of the mining industry should receive the hearty endorsement of ever thinking man and woman in the community. / The mines of the Delaware and Hudson Canal Company in this district, have the best record of safe working of any coal mines in the world [emphasis added]. This may be attributed to the greater care and precaution of miners working in them or to the greater vigilance of Mine Inspector W. S. Jones and other having them in charge. / During the year 1878 the Delaware and Hudson Canal Company mined 3, 093,618 tons of coal or 168,264 tons for every life lost, while the year previous the product of the Company was 193,586 tons of coal for every life. / The Schuylkill region turned out 10,056 tons last year, gave employment to 28,416 persons—had 490 accidents during the year, of which 113 were fatal, or one life lost for every 89,010 tons of coal mined, thus showing that the Lackawanna mines are less perilous than those of Schuylkill. / Mine Inspector Jones, states: / 'That the worst roof in his district is to be found in this Company's Collieries at Carbondale, but the propping is perfect and the timber the best used anywhere. Extra precaution is observed in consequence of the extra danger, and vigilance is rewarded with immunity from accident.' The Mine Inspector, adds, 'that the quality of the timber used by the Company has a good deal to do with it. Down the Valley where a lighter prop is used to sustain the roof, accidents are more frequent."

In his report to Governor Hoyt in 1880, W. S. Jones, Mine Inspector for the Lackawanna District noted that this was the first time that the Delaware and Hudson Canal Company did not have the

most favorable safety record for the year. His report to Governor Hoyt concludes with the following statement:

"The class of small operators has the most favorable record for the year, having mined 185,821 tons per life lost. The Pennsylvania Coal Company comes next with 181,773 tons per life lost. Then comes the Delaware & Hudson Canal Company with 146,069 tons per life lost. And the Delaware Lackawanna and Western with 136,792 tons per life lost. This order is almost wholly reversed from former years. The D. & H. has always had the most favorable record up to last year, the D. L. & W. second, the Penna. Coal Co. next, and the small operators last."

The following notice on the report of W. S. Jones to Governor Hoyt on mine safety in the Lackawanna District in 1880 was published in the *Carbondale Leader*, January 26, 1881, p. 2:

"MINE INSPECTOR'S REPORT. / W. S. Jones, Inspector for the Lackawanna District, has recently forwarded his annual report to Gov. Hoyt, in accordance with the Mine Ventilation Laws. [In the wake of the Avondale disaster in 1869, the Commonwealth of Pennsylvania began, in 1870, to require the preparation of annual reports by mine inspectors.] The entire report is interesting but our space will not permit its publication. The statistical portion of it we give below. / 'While far from believing that all is being done that ought to be, and can be, done to reduce accidents, still it gives me pleasure that I can make so favorable a report in this respect for the year 1880, as compared with former years. The number of lives lost during the year was thirty-seven, against fifty-nine for 1879, a reduction of forty-two; the number of widows was twenty-five against thirty-one for 1879, a reduction of six; the number of orphans was eightythree, against one hundred and twenty-five for 1879, a reduction of forty-two. The number of persons seriously injured during the year was one hundred and two, against one hundred and thirty-four for 1879, a reduction of thirty-two. These figures are favorable, but the most favorable figures are the following: The whole number of tons of coal mined in the district during the year was 6,293,457, which shows a tonnage of 170,093 tons for each life lost, which is by far the best record ever had for any year in this district in the history of mining coal. The nearest approach to it was in 1878, when the ratio was 145,396 tons per life lost. In 1879 the ratio was 121,730 tons per life lost. Taking the last four years, the average ratio has been 136,630 tons per life lost. / 'The causes resulting in death are as follows: Falls of roof and coal, twentyfive; falling down a shaft, one; premature blasts and blast hanging fire, three; crushed by mine cars, four; miscellaneous, underground, one; miscellaneous, on the surface, three. It will be seen that the deaths from falls of roof and coal reach the fearful percentage of sixty-seven and a half per centum of the whole number of deaths for the year. There was no fatal or serious accident from explosions of gas during the year. In my tables it will be perceived that I have divided the collieries into four classes, the large corporations each constituting a class, making three and the small companies and operators constituting the fourth class. I deem it proper to call attention here to the record of each of these classes with regard to their ratio of tonnage per life lost. The

class of small operators has the most favorable record for the year, having mined 185,821 tons per life lost. The Pennsylvania Coal Company comes next with 181,773 tons per life lost. Then comes the Delaware & Hudson Canal Company with 146,069 tons per life lost. And the Delaware Lackawanna and Western with 136,792 tons per life lost. This order is almost wholly reversed from former years. The D. & H. has always had the most favorable record up to last year, the D. L. & W. second, the Penna. Coal Co. next, and the small operators last." (Carbondale Leader, January 26, 1881, p. 2)

Production allotments for 1885 for the major coal producers in the northern coal fields, as established by "the combination," were reported in the January 16, 1885 issue of the *Carbondale Leader*. The production allotments for the D&H for 1885 were as follows:

January and February each, 165,000 tons

March, 198,000 tons

April and May, each, 264,000 tons

June, 275,000; July, 308,000; August, September, October and November, each, 357,500 tons

December, 231,000 tons

Here is the announcement that was published in the Carbondale Leader on January 16, 1885:

**"D. & H. PRODUCT FOR 1885.** / Tables have been prepared showing the amount of coal each company will mine each month according to the allotment of percentages. During the first half of the year the companies will produce but 12,100,000 tons, leaving 17,000,000 tons for the last six months. The Delaware and Hudson Company, in whose output this locality is particularly interested, will distribute the number of tons it has to mine throughout the year as follows: / January and February each, 165,000; March, 198,000; April and May, each, 264,000; June, 275,000; July, 308,000; August, September, October and November, each, 357,500; December, 231,000." (Carbondale Leader, January 16, 1885, p. 3)

Reduced working hours in the mines were announced in the *Carbondale Leader* of April 14, 1885, as follows:

"The mines went on three-quarter time again yesterday." (*Carbondale Leader*, April 14, 1885, p. 1)

Coal mining was a profitable business for the D&H. In 1885, in fact, nearly all the profits realized by the D&H came from its coal business. The total net profits of the company from coal mining in 1885 was \$1,488,097.07, or about 47 cents per ton on the coal sold. The following report was published in the *Carbondale Leader* of July 3, 1885:

"PROFITS OF COAL MINING. / The Delaware & Hudson Canal Company, as it would appear from a report recently issued by the directors, find the mining of coal to be profitable: at least nearly all of their profits are derived from that source. From tables compiled for the benefit of the public it is shown that the cost to mine a ton of coal last year was about \$1.38 1/4 per ton, and transportation expenses were about 55 cents per ton, and salaries, rent, taxes, etc., 12.7 cents per ton. / The average price realized on the sales of coal was \$2.53 per ton, and the average value of coal on hand is counted at \$2.15 per ton. The cost of mining is less than that of the Reading Company, and the cost of transportation is also very low; but it is not stated whether royalty or sinking fund on coal mined is charged on the cost of production, or just what is included under transportation. / The total net profits of the company on its last year's work was \$1,488,097.07, or about 47 cents per ton on the coal sold. In other words, nearly all the profits of the company came from its coal business [emphasis added]. The following summary is interesting: / Cost of mining......\$1.38 \( \frac{1}{4} \) per ton / Cost of transportation......55 / Cost of salaries, rents, etc. \$2.06 / Average receipt from coal 3/4/ Total 2.53 / Net profits .47 / The directors are of the opinion that the combination has been beneficial to the company. They say: / The mining of coal was suspended for 103 days during the year. Under the policy of restriction, the surplus or dividend fund was steadily increased, notwithstanding the payment for several years of dividends of six and seven per cent per annum/ The policy has again been adopted by the anthracite interests, though the method of carrying it into effect has been changed. It is believed that this method, known as the per centum or allotment plan, will show decided advantages in the economies of mining." (Carbondale Leader, July 3, 1885, p. 2)

The wages of the driver boys in the Delaware and Hudson Company's mines was reduced ten percent in late September/early October 1885. The boys at the Midland mine and at the Coal Book tunnel, in protest, went on strike. During their strike, their places in the mines were temporarily filed by men. It is generally believed that the boys will be glad to return to work in a few days, their efforts "to bulldoze the Company into a retraction of their order" not having been successful. In the *Carbondale Leader* of October 6, 1885 we read the following about this strike of the driver boys:

1885: "Struck for Higher Wages / The wages of the driver boys in the Delaware and Hudson Company's mines were reduced last week 10 per cent. This wasn't at all palatable to the boys and they resolved to bulldoze the Company into a retraction of their order. On Friday, the drivers at the Midland mine, numbering about 25, led off by 'striking,' and on Saturday the same

number struck at Coal Brook tunnel. They held a parade, with lighted mine lamps, around the mule barn of those mines Saturday afternoon in true strikers' style but failed to scare anybody. Their places in the mines are temporarily filled by men, and it is thought that the boys will be glad to return to their work in a few days." (*Carbondale Leader*, October 6, 1885, p. 4)

In early October, 1885, the D&H announced (1) that Legrand B. Cannon had been named Vice President of the D&H, and (2) that Horace G. Young, age 32, formerly Assistant General Manager of the D&H, had been named General Manager of the Delaware and Hudson Canal Company, with his office to be located at Albany. Here is the announcement of these promotions that was published in the *Carbondale Leader* of October 6, 1885:

"New D. & H. Officers. / The appointment of Legrand B. Cannon as Vice President, and Horace G. Young as General Manager, of the D. & H. C. Co. is announced. Mr. Cannon is one of the largest stockholders and oldest directors of the company, and Mr. Young is promoted from Assistant General Manager—a position which he had filled creditably for some time past. The new General Manager is nearly thirty-two years of age, and according to the *Honesdale Herald*, has an excellent record as a railroad man. He is said to be especially filled [possibly 'fitted'] for his new position by natural ability and technical education. The office of the General Manager is to be removed from Honesdale to Albany." (Carbondale Leader, October 6, 1885, p. 4)

In early October 1885, the sluggish state of affairs on the D&H Canal (shipments of coal down 200,000 tons from the previous year) came to an end when an order was received that, until further notice, loading shall be done as rapidly as possible at Honesdale, with locking through from 5 A.M. to 10 P.M. The locking force along the canal, in addition, would be doubled. That good news was published in the following article in the *Carbondale Leader* of October 9, 1885, as follows:

"The transportation of coal on the Delaware and Hudson canal has been lighter thus far this season than for several years. Boats have been loaded leisurely at Honesdale, and for weeks past the canal basin at that place has been filled with empty ones. The boatmen have suffered exceedingly because of the low wages. The shipments of coal to date are 200,000 tons less than they were at the same time last year, which was not up to average. The accumulation on the wharves at Honesdale is about 250,000 tons. A recent order directs that loading shall be done as rapidly as possible at Honesdale until further notice, and that the locking force along the canal be not only doubled, but that boats shall be locked through from 5 a.m. to 10 p.m. This sudden activity is taken as an indication of a general revival in the anthracite coal trade, and is especially welcome news to the boatmen as well as to the employes on the docks at Honesdale. Of course our city and the valley below will get a share of the benefits." (Carbondale Leader, October 9, 1885, p.2)

Half-time in the mines in Archbald in April 1886: In *The Journal* of April 22, 1886, we read:

"The coal miners here [Archbald] are working half time." (*The Journal*, April 22, 1886, p. 2)

With the closing of the Pennsylvania Gravity Railroad in 1885, the coal pockets there were superfluous and were removed. In *The journal* of April 22, 1886, we read:

"The *Honesdale Citizen* says: All the coal is being removed from the pile of the Penn'a Coal Co., in Hawley, as rapidly as possible, and when the work is completed the pockets will be removed, after which date our neighboring borough, as a storage point, will be a thing of the past." (*The Journal*, April 22, 1886, p. 3)

Coal shipments by the D&H during the first four months of 1886 was greater than in 1885 for the same period. In *The Journal* of May 20, 1886, we read:

"During the first four months of this year the amount of anthracite coal mined and shipped was 9,677,418 tons, an increase of 1,905,893 tons over the amount shipped during the same period last year. The Del. & Hud. C. Co. during the months of January, February, March and April have shipped 1,199,750 tons." (*The Journal*, May 20, 1886, p. 3)

In early October 1886, the coal business greatly improved for the D&H and nearly full time was expected at the mines for some time to come. During the first nine months of 1886, the D&H shipped 3,005,414 tons of coal, which was an increase of 256,408 tons over shipments for the same period in 1885. In *The Journal* of October 7, 1886, we read:

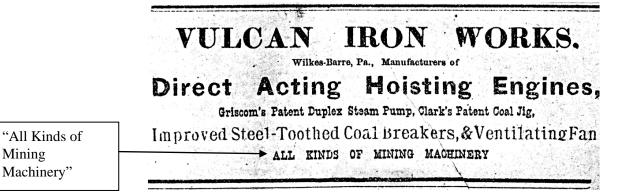
"The coal business has greatly improved within the past few weeks, and nearly full time may be expected at the mines for some time to come. / The D. & H. C. Co., last week shipped 86,108 tons of coal, and during the first nine months of the year their shipments amounted to 3,005,414 tons, an increase of 256,408 tons over shipments for the same time last year." (*The Journal*, October 7, 1886, p. 3)

Several changes of mine superintendents were announced by the D&H in the March 3, 1887 issue of *The Journal*, as follows:

"A number of changes of mine superintendents were made in the Delaware and Hudson Canal Company's Mine Department on March 1<sup>st</sup>. Patrick McCabe was transferred from the Midland mine to the new [emphasis added] Wilson Creek mine; William Dunstan from No. 3 shaft to the Midland mine, and Morgan Thomas, formerly foreman at Wilson Creek mine, was appointed superintendent at No. 3 shaft." (*The Journal*, March 3, 1887, p. 3)

Historical note: The Wilson Creek mine is described as "new" in the above notice.

In July 1887, the Vulcan Iron Works, Wilkes-Barre, announced that they had "All Kinds of Mining Machinery" for sale. Here is there ad from the Carbondale Leader of July 5, 1887, p. 2:



Mining

Carbondale Leader, July 5, 1887, p. 2

In May 1887, the validity of an announcement in the New York Tribune about mine operations in the anthracite coal fields of Pennsylvania (that the mines would be shut down for the first two weeks of May 1887) was questioned by the president of one of the leading coal companies in northeastern Pennsylvania. In the Carbondale Leader of May 3, 1887, we read:

"Mines to Shut Down for Two Weeks. / It was reported in Wall Street yesterday says the New York 'Tribune,' that the anthracite coal companies would restrict production by a suspension of mining during the first two weeks of May. The president of a leading coal company said: 'If there is any general movement of this kind I have not heard of it. I should suppose that some companies would do well to shut down their mining operations, but those that have not taken out coal ahead of their wants may not consent to a general suspension of mining. I am sure that I should have been informed of any plan looking for a general restriction. The coal companies are working well together and prices will be maintained. This company is not piling coal, and if others are doing so the fault is due to the inexperience of the managers. The coal companies are earning more money than they were a year ago, and that fact ought to be sufficient.' / The production of coal has been considerably larger than it was last year and the demand is said to have fallen off, not only from natural reasons, but also on account of the increased production." (Carbondale Leader, May 3, 1887, p. 4)

On May 3, 1887, a miner from Forest City wrote a letter to the editor of the *Carbondale Leader* about the poorly ventilated mines in Forest City. His letter is a good one. Hopefully, steps were taken at once to correct the dangerous condition in the mines in Forest City that were identified by this seasoned miner from Forest City. Here is his letter to the editor of the *Leader*, as presented in May 3, 1887 issue of the *Carbondale Leader*:

"A MINER'S COMPLAINT ./ He Says the Mines at Forest City are Poorly Ventilated./ To the Editor of the Leader: / FOREST CITY, May 3.--Would you please allow me a small space in your paper to state a trouble we have here in Forest City which can and ought to be remedied. It is concerning the air in the mine. The men are constantly complaining about it, but it seems all to no purpose. There is no system or rule that is put to effect here. The doors are not attended to as they should be, oftimes being left to the driver's care, consequently they are open most of the time, it not being the driver's duty to attend to them. I am an old miner and I always thought that a proper circulation of air was the most important thing in connection with a mine. The output is sure to be greater and everything to move along in its proper course; and in case of the fan being idle through breakage or any other cause it should be the officials' duty to notify the miners to come out at once. It is not so here. The men are not notified and are allowed to stay as long as they can stand it—until fairly smothered out and can scarcely crawl to their homes. Prevention is better than cure, and there is no cure for a man after he has lost his life. I have known cases where men have lost their lives through such dilly-dallying and negligence. Hoping that these few lines will not fail in their purpose, with good will to everybody, I remain very truly yours, / A MINER." (Carbondale Leader, May 3, 1887, p. 4)

In May 1887, the Delaware and Hudson Canal Company invited the miners in its employ, in the Lackawanna and Wyoming Valleys, to participate in a contributory medical insurance program. The procedures and guidelines that shall govern the fund, and the benefits available to those who subscribe to the fund, are described in the following article about the Delaware and Hudson Relief Fund that was published in *The Journal* of May 5, 1887, as follows:

"Delaware and Hudson Relief Fund. / The Delaware & Hudson Canal Company have very generously proposed to its workmen the following plan for the relief of sufferers from accidents in the mines: / First—Every person employed in any of the collieries, both outside and inside, may contribute to the fund, one day's wages and the company will contribute an amount equal to that contributed by all employes. Contributors *only* shall be entitled to the benefits of the fund. / Second—The fund thus raised shall be kept in the name of the company, and be subject at all times to the drafts or orders made thereon in pursuance of the object for which the fund is created, by the persons authorized to do so. / Third—The foreman of each colliery, together with two employes, to be selected by the contributing employes at each colliery, shall form a committee whose duty shall be to report to the superintendent of the company upon blanks

signed by at least two of them, every case entitled to the benefit, with the date and nature of the accident, and in case of accident not resulting in death to notify the superintendent when such relief shall cease. No money shall be paid out of the fund except upon a written order signed by the committee, or the foreman and one other member. / Fourth—It is proposed to apply out of the fund such amount as the company finds necessary to secure sufficient accommodations at the Lackawanna or Wilkes-Barre hospitals for those who may wish to be treated therein. / Fifth— The fund shall be applied to those entitled as follows: In case of accidental death, \$50 shall be paid for funeral expenses, \$3 per week shall be paid to the widow for the period of one year, provided she remains unmarried during that length of time, and \$1 per week to each orphan child under twelve years of age, of the person so killed, for the period of one year, unless otherwise cared for. In case of accidental injuries not causing death, \$6 per week shall be paid to each man during his disability to work, and \$3 per week to each boy under sixteen years of age during the period of three months, if necessary, but not longer. / Sixth—In case injured persons shall require medical treatment at the Lackawanna or Wilkes-Barre hospital and shall himself desire to be treated therein, it shall be the duty of the committee, or any two of them, to make an order for his maintenance and care at said hospital, and deliver the same to the superintendent. / Seventh— None but contributing employes who, while performing their duties at said collieries, shall have been accidentally injured, and the families of contributing employes who have been accidentally killed while engaged in the work of the company, shall be entitled to the benefits of the fund. A list of the contributors shall be kept at each colliery." (*The Journal*, May 5, 1887, p. 3)

The prospects for the future in the mining business in early September 1887 were brighter than they had been for a long time. Nearly all of the D&H collieries were running full time, and the DL&W gave each mine an additional day. In *The Journal* of September 1, 1887, we read:

"Mine inspector Blewitt says the Delaware and Hudson Canal Co. is running nearly all its collieries on full time, and that the Delaware, Lackawanna and Western programme this week gives each mine an additional day. The prospects in the mining business are better than they have been for a long time." (*The Journal*, September 1, 1887, p. 3)

In September 1887, nearly all of the Delaware and Hudson Canal Company collieries were operating full time, with the prospects in the mining business for the fall and winter being very bright. In *The Journal* of September 8, 1887, we read:

"The Erie and D. & H. mines are working full time. It is stated that there is a probability of full time throughout the fall and winter." (*The Journal*, September 8, 1887, p. 3)

In mid-October 1887, the coal business of the Delaware and Hudson Canal Company was so strong that the company, on Sunday, October 16, ran eleven coal trains from the D&H yard. In *The Journal* of October 20, 1887, we read:

"The coal business is so brisk that the D. & H. C. Co., were obliged to run eleven trains of coal from their yard here last Sunday. The fourth commandment don't apply to railroad men." (*The Journal*, October 20, 1887, p. 3)

As of Saturday, October 22, 1887, the Delaware and Hudson Canal Company shipped 305,025 tons more coal to market than it did by that date in 1886. In *The Journal* of October 27, 1887, we read:

"Up to last Saturday the D. & H. C. Co. have shipped 3,080,938 tons of coal this year, an increase of 305,025 tons over the amount shipped to same date last year. Last week they shipped 91,801 tons." (*The Journal*, October 27, 1887, p. 3)

The coal business in the Lackawanna and Wyoming Valleys in mid-November 1887 was very strong, with all the mines in the valleys being worked to their full capacity. So strong was the demand for coal that a sufficient number of coal cars could not be found to meet market needs. In *The Journal* of November 17, 1887, we read:

"The outlook is very encouraging for continued activity in the anthracite business throughout the winter. The stock of coal is exhausted at the seaboard, and the market throughout the cold season must depend on the amount mined during that period. The strike in the Lehigh region throws the source of supply to the other regions, and all the mines in this valley are being worked to their full capacity. The lack of cars for shipping the coal as fast as it can be mined somewhat cripples the industry [emphasis added]." (*The Journal*, November 17, 1887, p. 3)

Given the strike of 15,000 miners in the Lehigh region in November 1887, the Delaware and Hudson Canal Company, the Delaware, Lackawanna and Western Railroad Company, the Pennsylvania Coal Company, and all the smaller operators in the Lackawanna Valley sent all the coal to market that they possibly could at that time. A Scranton dispatch in the New York 'Sun' noted: "Never before was coal mining so brisk in the Lackawanna Valley as it is now." In a very interesting display of fraternal support, the striking miners in the Lehigh region received, weekly, aid from the miners who were working. In the *Carbondale Leader* of November 15, 1887, we read:

"Coal Mining in the Lackawanna Valley. / A Scranton dispatch in the New York 'Sun' says: Never before was coal mining so brisk in the Lackawanna Valley as it is now [emphasis added]. The Delaware, Lackawanna and Western Railroad Company shipped from Scranton in one day last week 31,000 tons, 5,000 tons more than it had ever shipped in one day before that date. / The strike of 15,000 miners in the Lehigh region is taken advantage of by the Delaware and Hudson Canal Company, the Delaware, Lackawanna and Western Railroad Company, the Pennsylvania Coal Company, and all the smaller operators in the Lackawanna Valley, and they are sending all the coal to market that they possibly can. The strikers are weekly receiving aid from the working miners, and it looks as though the Lehigh strikers will be able to hold out all winter." (Carbondale Leader, November 25, 1887, p. 4)

On Sunday, November 27, 1887, as on Sunday, October 16, 1887 (see above), the D. & H. C. Co. ran coal trains. In *The Journal* of December 1, 187, p. 3, we read:

"Owing to the demand for coal, the D. & H. C. Co. ran coal trains last Sunday. It is an unusual thing for the D. & H. to allow Sunday work in their business." (*The Journal*, December 1, 1887, p. 3)

During the first eleven months of 1887, the D&H shipped 413,675 more tons of coal over its lines than it did during the same period in 1886. This fact was reported in *The Journal* of December 22, 1887, as follows:

The Del. & Hud. C. Co. shipped 3,630,529 tons of coal the first eleven months of this year, an increase of 413,675 tons over the amount for the same time last year." (*The Journal*, December 22, 1887, p. 3)

Interesting statistics for 1887 in the Second Anthracite District on the questions of (1) number of tons of coal mined per injury, and (2) number of tons of coal miner per life lost are presented in the *Report of Inspectors of Anthracite Mines*, 1887, p. 26, which is reproduced below:

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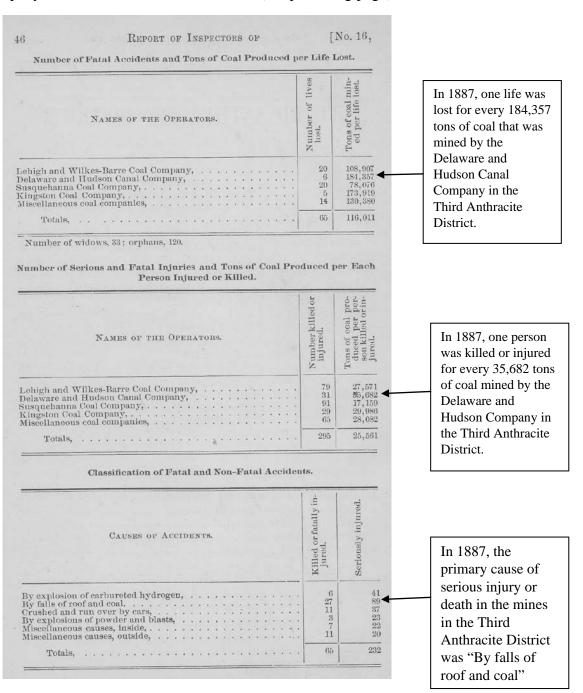
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By cars under ground,
By explosions of powder and blasts,
Miscellaneous causes inside,
Miscellaneous causes outside,

Interesting statistics for 1887 in the Third Anthracite District on the questions of (1) number of tons of coal mined per injury, and (2) number of tons of coal miner per life lost are presented in the *Report of Inspectors of Anthracite Mines*, 1887, p. 46, which is reproduced below:

In 1887, one life was lost for every 86,990 tons of coal that was mined by the Delaware and Hudson Canal Company in the Second Anthracite District (see preceding page).



Here is a summary statement for 1887 for coal mined and shipped by the Delaware and Hudson Canal Company: 4,071,291 tons for the year. The largest shipment ever made in one week by the D&H made during the week ending December 24, 1887, when 93,740 tons of coal were shipped. These data are from an article that was published in *The Journal* of January 12, 1888, as follows:

"During the year 1887, the Del. & Hud. Canal Co. mined and shipped 4,071,291 tons of coal, being an increase of 571,564 tons over the shipments for 1886. The largest shipment this company every made in one week was 93,740 tons during the week ending Dec. 24<sup>th</sup>." (*The Journal*, January 12, 1888, p. 3)

Here, from the same issue of *The Journal*, is a summary statement for 1887 for fatal accidents/injuries in the D&H mines:

"In mine inspector Blewett's district last year there were 57 fatal accidents, and 224 others injured. Thirty-two women were made widows and 110 children were made orphans by mine accidents." (*The Journal*, January 12, 1888, p. 3)

In October 1888, the president of the D&H was authorized to purchase, at his discretion, any available coal lands that might be offered.

In the summer of 1889, several serious mine cave-ins took place in the Carbondale area and it was feared that "the bottom may fall out of the town at any moment." In a clipping, very probably from 1889, from a Carbondale newspaper, very probably the *Carbondale Leader* (clipping pasted into one of the Gritman scrapbooks, with all of the clippings before and after it from 1889), we read:

"ALARM AT CARBONDALE. / The Bottom May Fall Out of the Town at Any Moment. / Carbondale, Pa., July 17 It now looks as if the bottom might drop out of this town and let it down an inconvenient distance. / On Saturday a farm hand was engaged harvesting the grain crop on the farm of T. J. Lee when the earth suddenly gave way and three of the four horses attached to the reaper upon which he was seated sank into the chasm. / The reaper and one of the wheel horses remained on the brink of the cave-in, while the other animals were firmly held by the earth which closed in upon them. The coal which underlaid these lands was removed years ago, and these cave-ins occur as the wood props which supported the roof rock give way. / The opening made in the surface by this cave is 25 feet long and 12 feet in width, and the greatest depth will probably reach 15 feet. / There is much alarm felt among the village residents over the possibility of their homes being swallowed up or at least wrecked by these sudden caves. There is also danger to the tracks on the Delaware & Hudson Company's railroad, which runs directly

over the seat of this trouble. The surface disturbances usually occur at night, a cave rarely taking place during the daytime. / Once in a while the bottom falls out of a cellar without interfering with the foundation walls. About a year ago a miner living near the Lee farm lost sixty bushels of potatoes and the product of his cabbage garden by a fall directly under his dwelling. The cave-in had not disturbed his slumbers, and he knew nothing of what had occurred until he opened the cellar door in the morning."

On June 11, 1890, a delegation of 40 eastern coal men visited the D&H's holdings in northeastern Pennsylvania. They were the guests of James C. Hart, Treasurer and General Sales Agent of the Delaware and Hudson Canal Company. In the following article that was published in the *Carbondale Leader* of June 12, 1890, the names and addresses of these 40 coal men, as well as a detailed itinerary for their visit to northeastern Pennsylvania are given. Here is that article:

"FORTY EASTERN COAL MEN. / Guests of the D. & H. Co. Sight Seeing in the Anthracite Region. / A large delegation of distinguished looking gentlemen arrived in this city yesterday afternoon by way of the gravity railroad. The party was made up of coal dealers under the charge of Robert K. Mackey, Assistant Sales-Agent of the Delaware & Hudson Canal Company, assisted by W. S. Rodie, Sales Agent of six eastern railways, and accompanied by S. S. Smith, Supt. of Rondout Dept., J. M. Dodge, Chief Engineer of the Coal Storage Company, A. C. Seymour, of the Chase Elevator Company, T. S. Mize, of the Black Diamond, (a coal trade journal) and W. H. Starr, Supt. of the Erie Del. Division. The party left New York on Monday, going to Rondout and from there up the Wallkill Valley and Erie to Goshen and from the latter place to Honesdale where they were entertained at the Allen House Tuesday night. Yesterday a special train carried the party to Farview where several hours were spent in looking over this mountain resort for pleasure seekers. After partaking of a sumptuous lunch the visitors enjoyed a ride over the famous end of the gravity road arriving at this city at 2:30 o'clock. / While in this city the party inspected the Coal Brook breaker of the D. & H. Company which is one of the largest in the valley. Many of the tourists were never in a coal mine before and their first experience was both surprising and gratifying. / The party then left Carbondale for Scranton arriving at 6 p. m. They were met by a party of representative Scrantonians who conducted them through the steel mill and back to the Wyoming. The party was composed of the following gentlemen: / A. D. Hoyt, New York; D. McCollum, Brooklyn; J. D. Van Olinda, Yonkers; H. L. Armstrong, Peekskill; George B. Taylor, Dobb's Ferry; C. J. Baxter, Cold Spring; Augustus Doughty, Poughkeepsie; Joseph H. Rose, Roseton; W. A. Tripp, Rhinebeck; W. B. Townsends, Coxsackie; John Avery, Catskill; S. Winnie, Coolmans; H. V. Youngman, New York; R. B. Bock, Albany; J. H. Blackburn, Albany; G. W. Washburn, Saugerties; Thomas Mattimore, Albany; W. S. Rodie, Kingston, N. Y.; S. M. Davison, Mattewan, N. Y.; J. W. Dorland, Fishkill; W. H. Foster, C. R. Belden, and W. R. Bingham, Hartford, Conn.; C. B. Holcomb, Tariffville, Conn.; W. J. Garvin, Winsted, Conn.; W. E. Payne, Rockvile, Conn.; E. Brown, Norfolk, Conn.;

C. J. Burget and T. M. Chapin, Great Barrington, Mass; D. Dresser and C. E. Kinkley, Lee, Mass.; L. F. Eaton and H. B. Randall, Amenia, N. Y.; M. K. Lewis, Wassaic, N. Y.; D. W. Wilbur, Red Hook, N. Y.; S. Howard Smith, Philadelphia; I. M. North and J. Hasbrouck, Jr., Rondout, N. Y.; Hon. V. H. Youngman, Albany; A. H. Vandling, Scranton; C. S. Weston of the Real Estate Department, D. & H.; Col. J. A. Price, and Hon. J. A. Scranton. / The party was tendered a banquet at the Wyoming House by the D. & H. C. Co. When the guests were ushered into the dining room they were each equally surprised to find at their respective places a neat souvenir in the way of an ornamental coal novelty. The guests were seated at about 9 o'clock with Mr. Mackey at the head of the table. After full justice had been done the seven well-served courses and the guests had been entertained with selections from Bauer's orchestra, Mr. Mackey rose and made a few witty remarks by way of an introduction. He then read letters of regret from H. G. Young, second vice president of the D. & H.; E. W. Weston of the same company; J. C. Hart, also as above; Chas. J. Water, W. R. Storris and J. W. Burdick. Col. J. A. Price made a speech on 'Culm waste" and Wm McMullen said a few words. Bauer's orchestra played a medley which ended one of the most enjoyable occasions ever held at the festive board of the Wyoming House. / To-day they go by a special train to Albany and from thence down the Hudson to New York, stopping on the way to view the Poughkeepsie bridge. / The excursion of these eastern coal dealers is in response to an invitation extended to them by James C. Hart, Treasurer and Gen'l Sales Agent of the Del. & Hud. Canal Company. They are evidently having a very jolly and pleasant time." (Carbondale Leader, June 12, 1890, p. 3)

In the spring of 1890, William Moore of West Market Street sold one hundred acres of land in Dickson to Messrs. Benner, Watkins and Williams, coal operators, for \$25,000, never suspecting that there was a 10-foot thick vein of coal 150 below the surface of that land. That land was then valued by its new owners at more than \$1,000,000. In the *Carbondale Leader* of July 23, 1890, we read:

"A MILLION FOR A SONG. / Coal Operators Strike a Bonanza Near Dickson. / About two months ago William Moore, of West Market street, sold 100 acres of land situated in Dickson borough to Messrs. Benner, Watkins & Williams, coal operators. The price was \$25,000. Soon after the land had been deeded over, the new owners erected a McEthen mine drill upon the place, and in a few days the huge auger was penetrating the bowels of the earth. This set Moore to thinking, and two weeks ago he sought the coal operators and offered them \$30,000 to sell back. / 'We would not sell for ten times that sum,' replied the artesians, and the old man turned away murmuring words of regret at having sold the farm. On last Wednesday morning the drill broke through a vein of coal ten feet thick at the depth of 150 feet. The coal is of the finest quality, and there are 'millions in it' for the new owners. The value of this land now is estimated at over \$1,000,000. This opens up a new coal sub field, and in a locality where the presence of coal was not even suspected." (Carbondale Leader, July 23, 1890, p. 3)

In 1890, the Vulcan Iron Works of Wilkes-Barre offered for sale a wide variety of railroad and mining equipment, including, among many other items, light locomotives of standard and narrow gauge, geared hoisting engines, Griscoll Duplex Steam Pumps, and improved steel-tooth breaker screens. Here is their ad from the July 29, 1890 issue of the *Carbondale Leader:* 

### VULCAN IRON WORKS,

WILKES-BARRE, PA., MANUFACTURERS OF

### Light Locomotives, Standard and Narrow Gauge.

Direct Acting Hoisting Engines, Geared Hoisting Engines, Guibal Ventilating Fans, Griscoll Duplex Steam Pumps, Improved Steel-Tooth Breakers, Screens, Locomotive, Tubular and Cylinder Boilers.

Shops at Pittston and Wilkes-Barre.

Postoffice Wilkes-Barre. Pa

Carbondale Leader, July 29, 1890, p. 3:

On the morning of October 27, 1890, work resumed at the Delaware and Hudson Colliery No. 2 at Olyphant following months of being idle. This good news for the people of Olyphant was reported in the *Carbondale Leader* of October 27, 1890, as follows:

"IDLE FOR FOURTEEN MONTHS. / Olyphant No. Two Resumes Work This Morning. / Work was resumed this morning at Delaware & Hudson Colliery No. 2 at Olyphant. For more than fourteen months the mine has been idle. The Olyphant Gazette of Saturday says: / A beginning will be made with forty-five places wherein possibly one hundred and eighty men will be employed. These with the company men, drivers and outside hands, and breaker boys which will be engaged, will with all those who are now at work, give our town such a business boom as it has not experienced for many a day. It is well, however, not to encourage too many outsiders into the town at present, as when it is taken into consideration, the overcrowded condition at the collieries now working, there will not be more than room for our own people, particularly since it is desired that all now here shall make full time when they go down in the mines, which they are not doing at present. For the past couple of months a gang of men, sometimes amounting in number to 55, have been employed in making repairs at the place--the consequence is that there are new guides, buntings, pumps, and in fact many other things which go to facilitate the work of getting out coal, but from the fact that many things are new, will require some time before all are working well. However, it is expected that things will be in full blast before the latter part of

November. Taking all into consideration, the people will be pleased to hear of the resumption, and that prospects look bright for a good winter's work." (*Carbondale Leader*, October 27, 1890, 3)

At 9:30 A.M. on October 30, 1890, Patrick Walsh of Carbondale, age 38, was killed by a fall of coal in the mines. Here is the report on the accident that was published in the *Carbondale Leader* of October 30, 1890:

"ANOTHER FATAL MINE ACCIDENT. / Patrick Walsh Thirty-eight Years Old and Unmarried Met Death This Morning by a Fall of Rock. / At nine o'clock this morning Patrick Walsh was carried into daylight by companions after being extricated from a great mass of fallen coal which fell upon him without warning while he was engaged in his duties as a miner, a position which he has held for a number of years. / A priest was hastly [sic] summoned and the injured man placed in the ambulance for conveyance to Emergency hospital. He never reached that institution alive, however, for he expired while going over. Examination revealed a great cut in the scalp and a smaller one on the chest, both resulting from the falling rock and the former injury causing his demise. / The aged mother of the deceased is still alive and lives near Farview street. Patrick was one of the sons she with her late husband brought to this country some seventeen years ago from Ireland where the deceased was born. He was thirty-eight years of age and had always evidenced a desire to live a manly Christian life. / A regular attendant at St. Rose church and a familiar and active figure in a number of organizations he will be much missed and his unfortunate demise will be learned with regret by scores of acquaintances. He was a man of proverbial good nature and his comely and pleasant face has brightened many circles. / Besides the above mentioned survivors there are two brothers, Michael and William Walsh both of this city. The funeral announcement will be made later." (Carbondale Leader, October 30, 1890, p. 5)

On August 31, 1892, two serious accidents took place in Jermyn No. 4 mine. In these two accidents, William Miles, Thomas J. Thomas, and Wadeck Pereshenksi were injured. The following report on these two accidents was published in the *Carbondale Leader* of September 1, 1892:

"Two Mine Accidents. / Two serious accidents occurred yesterday at Jermyn No. 4 mine. William Miles was painfully injured by a blast. He had gone down his chamber road to avoid the danger of a discharge which he had prepared, and thinking that the shot had gone off by hearing that of his neighbor miner, which was discharged in a cross-cut, returned to the face of his chamber in time to be struck by flying pieces from the explosion in his own chamber. Both holes had been prepared at about the same time, but the one in the cross-cut was discharged first. Miles was hurt about the head and shoulders. / The second accident occurred at nearly the same time,

11:30 o'clock a. m., and resulted in the serious injury of Thomas J. Thomas, a miner, and Wadeck Pershenski, a laborer, both Polanders. Both these men were engaged in tamping a hole when the powder became ignited and discharged. The blast cut more than two cars of coal and the wonder is that both miner and laborer were not killed. As it was Thomas was injured about the head and shoulders and his skull was slightly fractured. Pershenski was injured about the face and head, but his wounds are not dangerous." (Carbondale Leader, September 1, 1892, p. 4)

As a consequence of the remarkably mild weather during the fall of 1892, consumer demand for anthracite coal was down. As such, the mines in Carbondale and in the Carbondale area were put on half time on November 16, 1892. In turn, the employees of the Gravity Railroad were put on three-quarter time. In the *Carbondale Leader* of November 17, 1892, we read:

"PUT ON HALF TIME. The Working Hours of the Miners in This City Reduced. / The dullness of the coal trade, which has been mentioned in our columns on several occasions, is now being felt here and the mines of the Delaware & Hudson company in this city and vicinity were yesterday put on half time. / As a result the employes of the Gravity railroad are only called upon to labor three-quarters of the time each day that has been their former want. / How long this condition of things will last can not be said but the remarkably mild weather of the fall months which has been so pleasantly commented upon by many has had a depression on the coal trade that will soon be felt in all lines of business in this city." (Carbondale Leader, November 17, 1892, p.4)

#### **Colliery and Coal Lands Note:**

In 1892, the D&H owned, operated, and shipped anthracite from 19 collieries in the First Anthracite District of Pennsylvania.

Coal lands in Scranton: "The coal lands in West Scranton, part of the 'Flats,' and Taylor were obtained by the Delaware, Lackawanna and Western Railroad. The Delaware and Hudson bought up much of the coal holdings in North Scranton, and the Pennsylvania Coal Company purchased most of the mineral rights under Green Ridge and Dunmore." (*Petula*, p. 108)

Removing slate from anthracite coal before it was sent to market was a major concern of all the coal companies. On March 19, 1895, John Fern, outside superintendent of the Archbald mines, was granted a patent on the Fern Slate Picker. About the man, who also had patents on mining lamps, another slate picker, a self-adjusting belt stretcher, and a cable stretcher, we read in *PABRLC*, pp. 625-27 (photo p. 624), the following:

"JOHN FERN. The general intelligence, high moral character and business ability of the outside superintendent of the Archbald mines are such as to entitle him to the respect of the entire community and the deeper esteem of those who know him well. A skilled mechanic, he has applied his inventive ability to practical purposes. March 19, 1895, he patented the Fern slate picker, which is already in general use and is conceded to be a very superior device, being a combination of friction and specific gravity. In addition to this, he has patents on mining lamps, another slate picker and self-adjusting belt stretcher and cable stretcher. . ." (p. 625)

Here is the complete biographical portrait of John Fern that is given in *PABRLC* (pp. 624-627):



Biographical Portrait of John Fern.

John Fern had patents on the Fern Slate Picker, on mining lamps, another slate picker and self-adjusting stretcher, and a cable stretcher.

...outside superintendent of the DL&W Archbald mines...

...the Fern slate picker... and other patents held by John Fern... OHN FERN. The general intelligence, high moral character and business ability of the outside superintendent of the Archbald mines are such as to entitle him to the respect of the entire community and the deeper esteem of those who know him welf. A skilled mechanic, he has applied his inventive ability to practical purposes. March 19, 1895, he patented the Fern slate picker, which is already in general use and is conceded to be a very superior device, being a combination of friction and specific gravity. In addition to this, he has patents on mining lamps, another slate picker and self-adjusting belt stretcher and cable stretcher.

The Fern family originated in Germany, where was born Peter, our subject's father, a painter by trade and a man of industrious disposition. In 1842, accompanied by his wife and only child, he left Bremen, his native place, and emigrated to America settling in Carbondale, where our subject was born March 14, 1845. In 1846 he came to Scranton (then Slocum's Hollow) as a miner and railroad contractor for the Lackawanna Iron & Coal Company. Three years later, at the beginning of the great gold excitement in California, he went there via Panama and engaged in mining for two years. In 1852 the family started to join him, making the long and tedious journey to San Francisco, only to find on arriving there that he had died three days after they left New York City on the "Union." He was buried in Sacramento. The widowed mother, thus unexpectedly finding herself alone, among strangers, was placed in a position that would have daunted a woman of less resolute strength. But realizing that her children were dependent upon her, she faced the future bravely, and planned for the comfort of her dear ones. It was six weeks after her arrival in California before she learned the fate of her husband, and afterward she remained for a time in the far west. There was, however, nothing to detain her there long, so with her daughter and two sons she started back to New York, going on the "Oregon" to Panama and from there on the "Georgia."

The mother of our subject, to whose noble character he owes so much, was Catherine Schoeffer, whose father spent his entire life in Germany and was superintendent of a colliery in Hesse-Cassel under the government, dying in his native place at ninety-four years of age. In youth he had served in the German army. Mrs. Fern, on her return to the east, settled in Wilkesbarre and bought a business place in South Main Street, where she engaged in the grocery business. In that place she married Capt. William Gaul and then came to Dunmore, this county, where she carried on a grocery trade. In 1855 she removed to Bellevue, at the time when the original shaft was being sunk, but after five years she went to Jermyn. Her second husband, who was a captain in the German revolution, volunteered in the Union service as a member of Battery C, First Pennsylvania Light Artillery, and was killed at Fair Oaks, May 30, 1862. His widow now lives in Scranton and enjoys fair health for one of her years (seventy-nine). In religious belief she is identified with the German Presbyterian Church. Of her first marriage two sons were born, the older being Julius, a jeweler in Wilkesbarre. The three children of her second marriage are William A., a carpenter with the Delaware, Lackawanna & Western; Charles H., who is engaged in the hotel business in Lackawanna Township; and Lizzie A., Mrs. George Stevens, of Scranton.

Though our subject was quite young when the family went to California, he remembers the trip distinctly and its many perilous adventures made an indelible impression upon his mind. After the age of ten years his education was limited to

At age 9, John Fern became a slate picker.

He was the first boy at Belleview who was advanced from slate picking to greasing cars.

John Fern's Civil War service such knowledge as could be acquired by attendance at night schools and by self-culture. At

that age he became a slate picker in the Bellevue mines of the Delaware, Lackawanna & Western, and when quite young was the mainstay of the family, as his brother was apprenticed to a trade and therefore earned nothing.

He was the first boy advanced from slate picking to greasing cars, and afterward became driver boy at the Bellevue coal drift, now abandoned. He was transferred to the old Bellevue shaft as driver boy, later was advanced to assist the stable boss, being the first to hold the position, and next in the blacksmith's shop learned the trade.

▶ In August, 1862, Mr. Fern became a member of Company I, One Hundred and Thirty-second Pennsylvania Infantry, and was mustered in for nine months at Harrisburg as a private, afterward taking part in the battles of South Mountain, Antietam, Fredericksburg and Chancellorsville. The latter engagement was fought three days after the expiration of the company's period of service, but they volunteered by request of the general in command. At Antietam Mr. Fern was slightly wounded by a ball in the left forearm, but with that exception went through the war unharmed. On his return home, he refused to again take his former position, because the one who filled it during his absence had a wife and three children and to throw him out of work might cause his family to suffer. Instead, he began to work as a blacksmith at the Cliff plant, but after three months took a position under J. P. Acker, foreman, with the Delaware, Lackawanna & Western Company, at the Continental mines. At the end of two months the man who held his former position at Bellevue was drafted, creating a vacancy, and he went there, wishing to be with his mother.

As a member of the construction corps, department of Tennessee, in 1864 Mr. Fern went from Nashville to Atlanta, then returned toward Nashville under Slocum and joined Thomas at Franklin. He was present at Altoona, Marietta and Big Shanty, and returning to Franklin, was in the third train of the army of the Cumberland and assisted in the construction of a bridge across

Green River. On his return in January, 1865, to Bellevue, there was no vacancy here, but he was given work as a blacksmith at Plymouth, and remained there two years and ten months. In 1860 he came to Scranton as blacksmith in the sinking of the Dodge shaft and was retained as expert mechanic until May 10, 1872, since which time he has been superintendent of the Archbald mines of the Delaware, Lackawanna & Western Company. He was the first regular foreman of the shaft, which was sunk in 1870 and operated for the first time in the fall of 1871.

The marriage of Mr. Fern, in Scranton, united him with Miss Euphemia B. Hall, who was born in Tunkhannock, and they reside at No. 115 North Sumner Avenue. Their six children are named as follows: Nellie, wife of G. L. B. Skillhorne, of Philadelphia; John R., electrician with the Brooklyn & Long Island Traction Company, of Brooklyn; William H., who is his father's assistant; B. F., a contractor in Lackawanna Township; Nettie C., wife of Charles E. Olver, an attorney of Scranton; and Bertram C., a student in the Philadelphia Dental College. Mrs. Fern is a daughter of Jackson Hall, a railroad man residing for some years in Tunkhannock, but subsequently removing to the vicinity of Kalamazoo, Mich., where he was employed as a contractor until his death. Afterward his widow, Margaret (Reiley) Hall, returned to Tunkhannock, and spent two years with her brother there, but then removed to Scranton, where she still resides.

September 10, 1888, Mr. Fern met with a serious accident at his mines while unloading a car of lumber. For some unforeseen cause, about two thousand feet fell from the car and struck his head, knocking him down, fracturing his hip and breaking three ribs. He was carried home at once, and no one thought there was a possibility of his recovery, but a strong constitution saved him, though he still suffers from the effects of the injury. In 1890 he was obliged to undergo an operation in a Philadelphia hospital, and has since been better.

Fraternally Mr. Fern is past officer of Globe Lodge, chief patriarch of Hyde Park Encampment, member of Scranton Canton No. 4, WaHe was superintendent of the Archbald mines of the DL&W.

netta Lodge No. 23, D. R., I. O. O. F.; Hyde Park Lodge, Knights of Honor; Lieut. Ezra S. Griffin Post No. 139, G. A. R.; and West Side Club. He is president of the Taylorville Building & Loan Association; president of the Traders Building & Loan Association of Hyde Park; was appointed member of the school board of Lackawanna Township and one year later was elected to the position, serving four years altogether, the first year as president and the second year as treasurer. Politically a Republican, he has been on the county committee for three terms. For twelve years he was secretary of the old fifth district legislative committee, and when the district was changed by the formation of the new county and the third district was organized, he was made the first secretary of the committee, became its first chairman, and served as chairman of the committee on resolutions. He was the first Sunday-school superintendent of the Methodist Protestant Church, now the Hampton Street Methodist Episcopal Church; his membership now is in the Simpson Church, which he serves as trustee. For some time he made his home in Lackawanna Township, but since 1894 has resided at his present place in Scranton.

## 1897 Report of the Bureau of Mines of the Department of Internal Affairs of Pennsylvania, Including Reports of Mine Inspectors.

The inspector of Mines for the First Anthracite District (Lackawanna and Susquehanna Counties) was Edward Roderick. Here is the introduction, p. 1, to his report for 1897:

"Scranton, Pa., February 14, 1898. / Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg, Pa. / Sir: I have the honor of presenting to you my annual report as inspector of mines of the First anthracite district for the year ending December 31, 1897. / The total quantity of coal produced was 6,249,833 tons, which is 22,386 tons more than in 1896. / The number of fatal accidents was fifty-three, non-fatal one hundred and twenty-five. Twenty-eight wives were made widows, and sixty-six children under fourteen years of age were made fatherless by the accidents. / The average number of days worked was 165.4 against 174.9 in 1896. / There were 117,921 tons of coal produced per fatal accident [emphasis added]. / The general condition of the mines is good. The ventilation is ample. Several new fans were erected during the year./ The report contains the usual tables, a brief description of each accident, and a few remarks as to the causes of many of them. / Respectfully submitted, EDWARD RODERICK, / Inspector of Mines."

The 23-page document contains a wealth of information about mining in the First Anthracite District and about the D&H. From Table A (on page 2), for example, we learn the names of the 21 coal companies in the First Anthracite District and the number of tons of coal produced by each one, as well as the number of employees in each company.

The 21 companies are: Delaware and Hudson Canal Co., Hillside Coal and Iron Co., Delaware, Lackawanna and Western Railroad Co., Pennsylvania Coal Co., Lackawanna Coal Co., Johnson Coal Co., Pancoast Coal Co., New York and Scranton Coal Co., North West Coal Co., Elk Hill Coal and Iron Co., Sterrick Creek Coal Co., Edgerton Coal Co., Blue Ridge Coal Co., Dolph Coal Co., Forest Mining Co., Mt. Jessup and Moosic Mountain Coal Co., Riverside Coal Co., Murray Coal Co., Pierce Coal Co., Franklin Coal Co., and Russell B. Coal Co.

There were 18,066 employees in those 21 companies, which produced 6,249,833 tons of coal. In the largest company, the Delaware and Hudson Canal Co., 5,904 employees produced 2,249,739 tons of coal.

From Table B (p. 2) we learn that in the Delaware and Hudson Canal Co. there were 14 fatal (and 33 non-fatal) accidents during the year 1897, and that there were 160,695 tons of coal produced per life lost.

In Table F, p 4, very interesting data are presented on the nationality of the persons killed or injured.

| _         | Killed | Injured |
|-----------|--------|---------|
| Polish    | 8      | 29      |
| Irish     | 12     | 20      |
| American  | 3      | 21      |
| English   | 10     | 14      |
| Welsh     | 5      | 17      |
| Hungarian | 5      | 6       |
| Italian   | 4      | 6       |
| Austrian  | 2      | 4       |
| German    | 1      | 2       |
| Slavish   | 3      | 1       |
| Russian   | 0      | 2       |
| Grecian   | 0      | 2       |
| Scotch    | 0      | 1       |
| Total     | 53     | 125     |
|           |        |         |

From Table 1, (Showing Location, etc. of Collieries in the first Anthracite District), on page 8, we learn that the names of the 13 Delaware and Hudson Canal Co. collieries in Lackawanna County in 1897 were: Leggetts Creek, Marvine, Eddy Creek, Olyphant No. 2, Grassy Island, White Oak, Jermyn No. 1, No. 1 Shaft, Powderly, No. 3 Shaft, Coal Brook, Racket Brook, and Clinton.

In those 13 D&H collieries, 2,249,739 tons of coal were produced; 140,396 tons were used for steam and heat; 20,052 tons were sold to local trade and used by employees; 2,229,683 tons were shipped by railroad. The number of days worked in those 13 collieries, 194.70; 5,904 persons worked in those 13 collieries, in which there were 14 fatal and 33 non-fatal accidents. There were 73,336 kegs of powder used in those 13 collieries, in which there were 141 steam boilers and 5 mine locomotives. Six hundred and eight horses and mules worked in those 13 collieries. (1,828 horses and mules worked in all of the collieries in the first anthracite district in 1897)

In 1897, there were 14 fatal and 33 non-fatal accidents in the 13 D&H collieries in Lackawanna County. In Table IV, for each of those 14 fatal accidents, the following data are given (pp. 17-19): name of person, occupation, age, widow, number of orphans, name and location of colliery, and nature and cause of accident. The names of those 14 persons are as follows: Thomas Perkins, Thomas Waite, John T. Coleman, James Nolan, Anthony Laughney, Michael Murphy, William Limon, William Court, William Price, Adam Ladolan, Thomas Morris, John Benson, Samuel Treasurer, and Michael J. Kelly.

In Table V (pp. 20-23), for each of those 33 non-fatal accidents, the following data are given: name of person, occupation, age, name and location of colliery, and nature and cause of accident. The names of those 33 persons are as follows: William McDonough, Thomas Lewis, James Bell, Anthony Kelley, Thomas McCabe, James Cousin, Theodore Harvey, Patrick Malia, William Costello, Neice Quinn, Thomas Wooley, John Gillooly, George A. Saunders, Curtis Rolls, Owen H. Hughes, Joseph Dillon, John Collicott, Thos. L. Jones, William Vaughan, Thomas Pope, Edward Purcell, Nicholas Murrach, Henry Cordner, James Simerson, Patrick Dixon, John Cerra, Gus Wiltz, James Hoban, Patrick Fadden, William Healey, Richard Abbott, Edmund Thomas, and George Davis.

In his report, Edward Roderick makes the following remarks (pp. 4-7) on the 53 fatal accidents that occurred in the First Anthracite District in 1897:

"Remarks on Fatal Accidents.

Fifty-three fatal accidents occurred in this district during the year. Of these, 38, or 71.7 per cent, were caused by falls of coal and rock, and the most of them at or near the faces of breasts and gangways.

Many of them occurred shortly after unsuccessful efforts had been made to pull down the loose pieces, while of others it can be truthfully said that they were purely accidental, for oftentimes the dangerous slabs of rock are covered by a thin layer of coal which hides their treacherous character and thus frequently deceive the most careful miners.

I find a very striking similarity between many of the accidents caused by falls, hence the evidence of those who are unfortunate enough to witness them is practically the same in many cases, as will be seen from the descriptions given on table number four.

On numerous occasions during my tours through the mines I have found it necessary to question the safety of the roof, and have caused examinations to be made, only to find it 'safe and solid in all places but one.' A closer inspection of this 'one place' gives a hollow sound by striking it with a drill or pick, and reveals a seam or 'slip' that is found to run up for some distance into the roof, then, as is often the case, down on the other side a short distance, thus forming a small ridge of rock entirely detached from the main roof, and which would in all probability, if not taken down, fall on some one in a short time. It is an actual fact, and well known to most practical miners, that all 'bells' or 'sulphur balls' fall from smooth and apparently good roof shortly after examinations of them have been made.

These detached slabs occur in all kinds of roof but are met mostly where the roof is fire clay or slate, though they are quite often found in sand rock.

They are of various forms, and increase in size from the small lumps of black rock known as 'nigger heads' and 'bells' to large, massive slabs sometimes measuring as much as twenty to thirty feet in length and half this width, while not more than three feet thick at their centres and tapering to thin or 'feather edges' on all sides. These frequently extend a short distance over the solid coal on the sides and faces of breasts or gangways, thus hiding the 'slips and seams,' and leaving exposed the outer edge. This of course, the miners know about, and after an examination, if the slab is large and much labor required to remove it, rather than do so they conclude that 'it runs thick towards the rib, or extends over the rib or the face and that will hold it.'

Trusting it to be temporarily safe, they proceed to work and think no more of the roof until after firing one or more shots, they discover the seam to be somewhat wider than when first noticed. Again an inspection is made, and perhaps another effort made to pull it down. If it 'comes' easily, well and good. If not, it is left and a prop or two placed under the outer edge to 'steady' it. Thinking all the time that it thickens towards the face or rib, and that the props will surely secure it, and confident now of their safety, continue working with no more thought of danger from this source. It appears that it does not occur to them that the seams already noticed may continue up for a short distance, then down, and that they may be gradually removing the inner supports from under a loose piece of rock by mining out the coal.

If the coal were not removed, and the props left standing at the outside edge, we can readily see how this slab would remain in position for an indefinite period. But this is not the case as the coal temporarily sustaining it is soon taken away in the course of mining, and it as surely falls as it would if the wooden supports were suddenly removed from under it. Experienced miners, as already intimated, are frequently injured or killed by these loose pieces of rock falling, as they sometimes do, from small spaces between two or more props, and where, naturally, the least danger is suspected.

It is seldom, however, that falls occur on gangways or breast roads, except close to the faces, where work is progressing and space for properly securing the roof is not yet made.

In several cases during the year very careful miners were killed while in the act of putting up timber to secure the roof. In such cases it must be admitted that they had some knowledge of the conditions of the roof, otherwise they would not have proceeded to timber it. At the same time some conditions which they did not suspect existed and thus they were led into an error of judgment which cost them their lives.

Where 38 out of a total of 53 accidents occur from one cause, it seems very reasonable to suppose that something must be radically wrong, either with the methods of mining or the management, which if remedied much fewer accidents would naturally follow.

This undoubtedly is a very natural conclusion, but a closer investigation of each one will show how and where each one occurred and convince anyone conversant with mining as to where the responsibility lies.

As already stated, a glance at table four will show that the most of them happened at or close to the working face, and from danger that none but those working there can guard against.

The roof in a breast or gangway may be perfectly safe when the miners enter in the morning, but with every shot fired, new ground is uncovered, and slips and seams in top coal and roof exposed, to which the miners, as a rule do not pay sufficient attention. Again, if the vein is split into two or more benches, as is generally the case, the 'mining' as a rule is done in the 'bottom' and requires but six or seven holes to take out a 'cut' clear across the face of the breast.

This I consider is all right and a very economical and practical method of mining, and where proper care is exercised with roof and overhanging coal and rock, few accidents occur. But when the top coal is 'slippy' and the miner works too far under it without temporary props to support it, and neglects to carefully examine it after each shot is fired, and reaches under it to bar out some coal loosened by a recently fired shot, when perhaps the same has spent most of its force on the now six or seven feet of undermined 'top coal,' it is then that it falls and kills while 'barring out the bottom bench.'

#### **Mine Foremen' Examinations**

The annual examination of applicants for mine foreman and assistant mine foremen certificates was held at Carbondale, Pa., on the 21st and 22d of July, 1897. /The board of examiners were the following: / Charles P. Ford, superintendent, Marshwood. / James E. Morrison, miner, Carbondale. / Joseph T. Roberts, miner, Jermyn. / Edward Roderick, mine inspector, Scranton. / The following were recommended for mine foreman certificates: W A. James, Arthur Wrightson and John T. Williams, Peckville; David D. Jones, Pully; Thos. J. Kieltz, Archbald; John P. Williams and W. H. Mincher, Olyphant; James D. Bryden, Vandling; John H. Lewis, Priceburg, and William D. Lewis, Carbondale. / The following were recommended to receive assistant foreman certificates: / Daniel Price, Thomas George and Alfred Parry, Scranton; Thomas A. Price, Taylor; John Price and Peter Flannelly, Carbondale; Robert Colburn, Priceburg; G. P. Propst and P. H. Nealon, Archbald; Slater Cairns, Winton; John Reese, Olyphant; E. G. Jones, Peckville, and William F. Sullivan, Jermyn."

(End of material from Edward Roderick's wonderfully detailed and very useful 1897 Report of the Bureau of Mines of the Department of Internal Affairs of Pennsylvania, Including Reports of Mine Inspectors.)

#### **Whitebridge Slope Mines:**

We have grouped here a body of material that relates to the Whitebridge Slope Mines in Carbondale.

On April 21, 1885, a serious mine accident took place at White Bridge No. 1 tunnel in which James McGowan, Michael Connor, and a mule were killed when a slab of roof rock about five inches thick and twenty feet square fell and crushed them. Here is the account of this accident that was published in the *Carbondale Advance* of Aril 25, 1885:

"A serious mine accident occurred Tuesday at No. 1 Tunnel. James McGowan and his two sons were working a chamber together. Michael Connor, a driver boy, was driving a car up to the place. When within a few feet of the breast the car got off the track. The older McGowan and the driver boy were in the act of lifting it on, when a slab of roof rock about five inches thick and twenty feet square fell and crushed them and the mule to death. This slab, or bell, commenced with a feather edge. Jas. McGowan, Jr., was partly under it, and he sustained serious injuries. The other son was luckily away from the place at the time. / The result of Coroner Dean's investigation of the accident at the White Bridge Tunnel on Tuesday, in which James McGowan

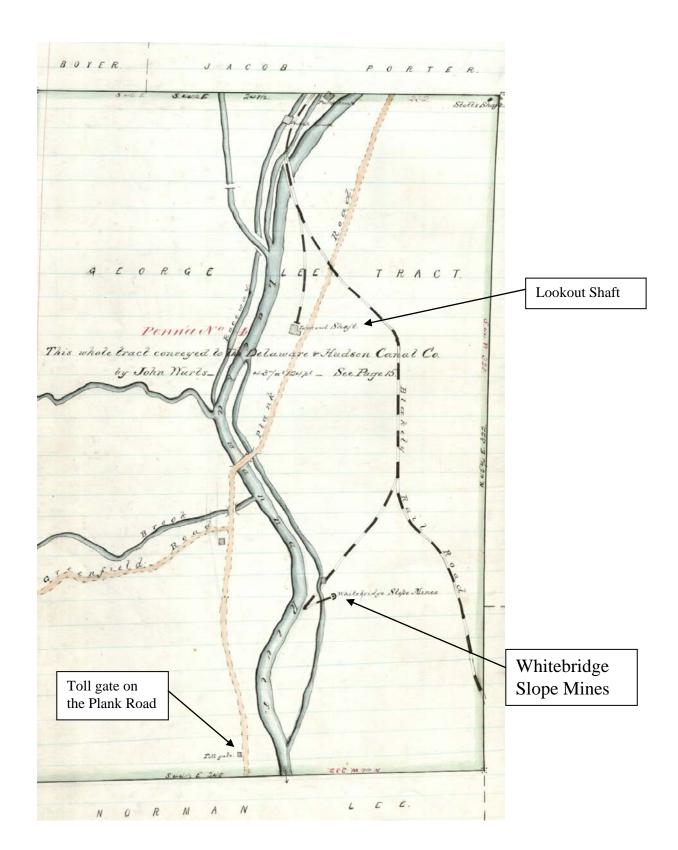
and Michael Connor were killed, was a finding by the jury composed of Messrs. Walker, Farries, Jones, Martin, Atkinson, Burke, Mooney and McCann, that the deceased came to their death by a fall of roof slate, which was not sufficiently secured by props." (*Carbondale Advance*, April 25, 1885, p. 3)

In the story by S. S. Benedict published in the *Carbondale Advance* of April 19, 1862 about the breaking of the Ball, or Campbell dam, early in the morning of April 13, 1862 (story later reprinted in the *Carbondale Leader*), we read the following about the location of the White Bridge:

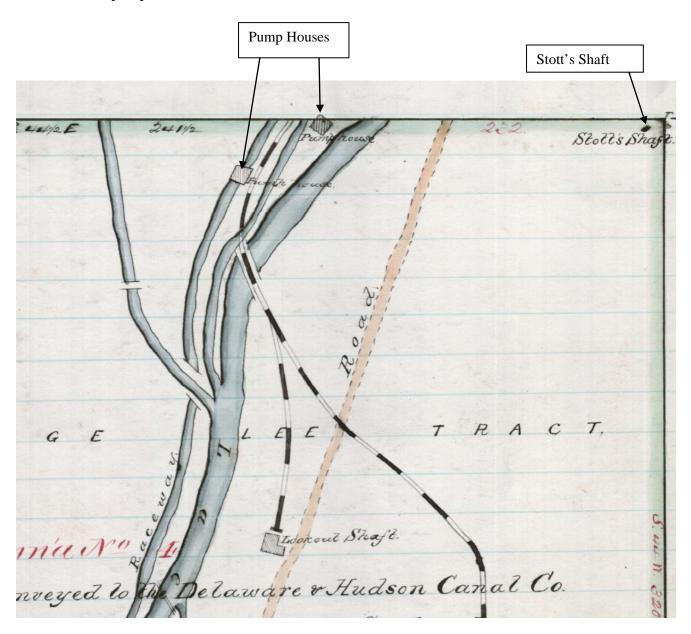
"The turnpike bridge, known as White bridge, which crosses the Lackawanna a short distance below the confluence of the Fall Brook and the larger stream, was removed from its base [by the flood waters from the Ball dam]. / The all conquering waters swept nine persons to death as they wrecked houses which had been built along the banks of the river in that part of Brooklyn street near the present-day store of T. J. Gilhool. . ."]

Bridge 13 on the O&W's line through Carbondale was located at White Bridge—just south of present-day Ezman Auto on Route 6. The trolley tracks of the Carbondale Railway Company passed under Bridge 13 on the inside/tightest part of the curve in the road under Bridge 13. Bridge 11 on the O&W through/over Carbondale crossed over four different tracks, namely, from east to west: the double-track main line north to Lanesboro (Erie until 1955, then D&H), the D&H yard lead tracks, and the D&H Gravity tracks to Plane 28.

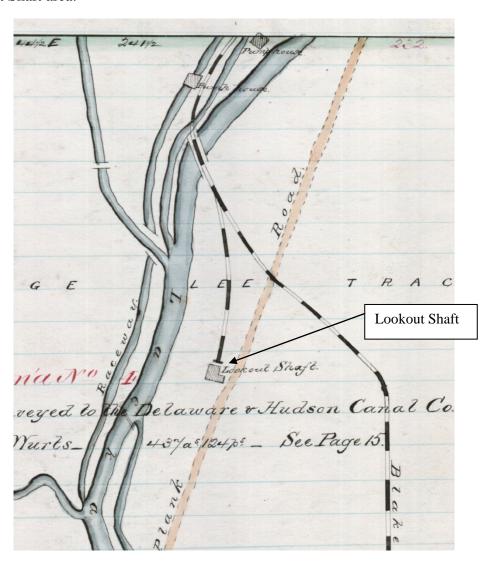
The Whitebridge Slope Mines (as well as the Lookout Shaft, Stott's Shaft, the two lower pump houses and the Plank Road Toll Gate) are shown on the map, p. 14, given below from the Luzerne County volume of the D&H deed book in the collection of the Carbondale Historical Society. The map illustrates a deed, pp. 15-16, dated November 1, 1825, between John Wurts and The Delaware & Hudson Canal Company. Here is a scan of the whole map, followed by close ups from the map:



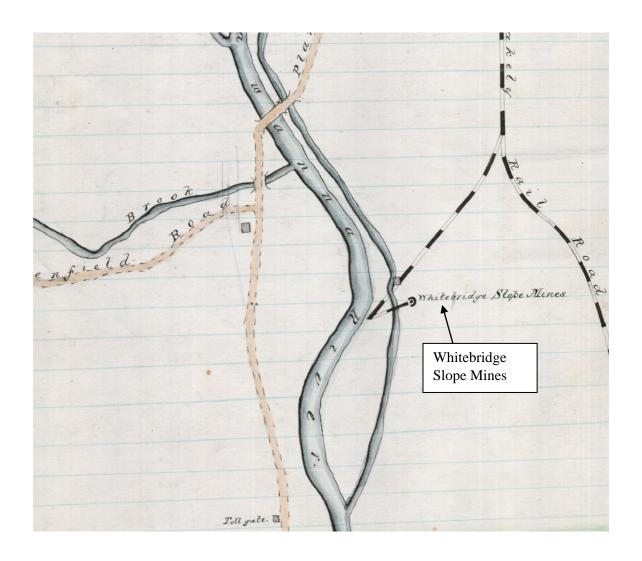
# The two lower pump houses:



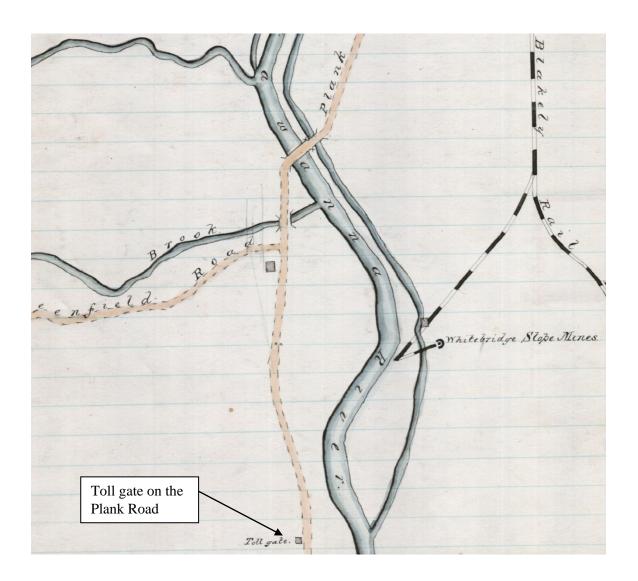
# The Lookout Shaft area:



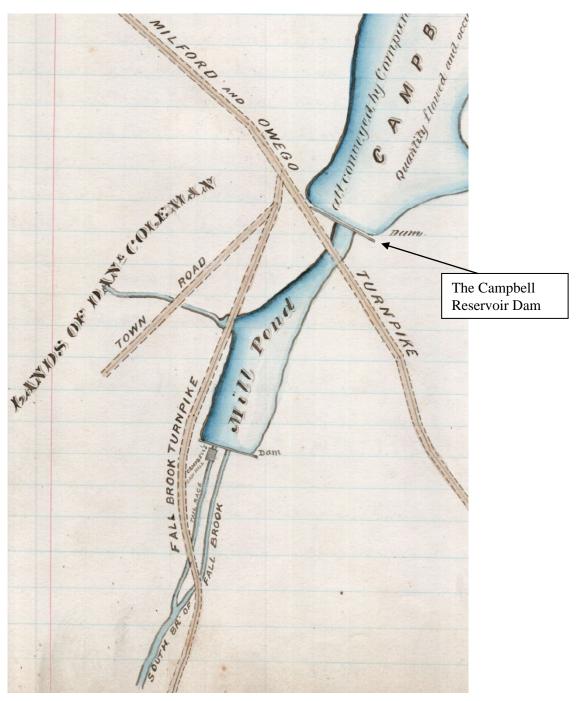
# The Whitebridge Slope Mines:

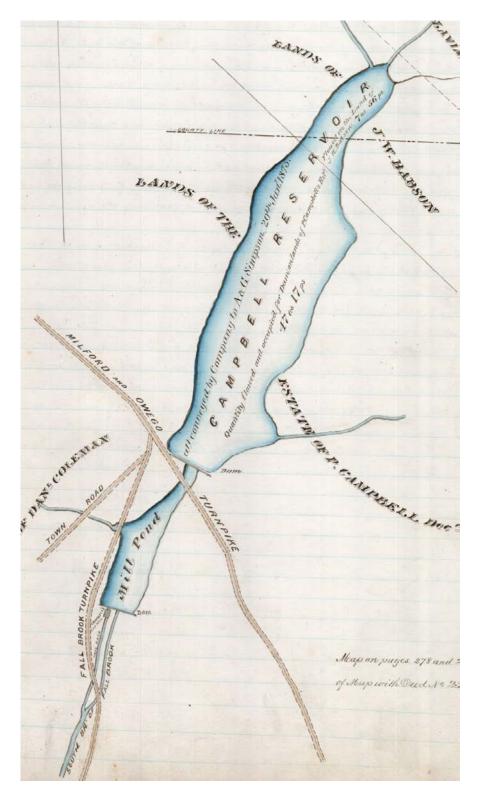


The Toll Gate on the Plank Road:



Here are two views of the Ball or Campbell Dam from the map on page 279 of *D&H Deeds Luzerne I*, that illustrates the deed, pp. 276-78, dated August 27, 1862, between Charles B. Campbell and the Delaware and Hudson Canal Company:





(end of Whitebridge material)

In 1891, the D&H produced nearly four million tons of anthracite coal.

In 1892, the D&H produced 4,396,852 tons of anthracite coal.

The cold weather at the beginning of February 1898 was very good for the coal business. Orders for coal first doubled, than quickly trebled, and soon the demand was greater than the supply, which meant that working hours for the miners had to be increased to keep up with the customer demand. In the *Carbondale Leader* of February 5, 1898, this good news for the working man was announced as follows:

"IMPROVING. / The Present Cold Weather is Giving a Great Impetus to the Coal Trade. / All those who are dependent upon the consumption of anthracite coal will earnestly wish for an indefinite extension of the present cold weather. The D. & H. mines started to work on threequarter time today. The intention was to work at half rate during the month of February. / All the companies some time ago reduced the number of working hours in order that the market may not suffer a glut. The weather during the winter has been so open and mild that the stocks had quite reached the safety limit and the orders had fallen off considerably. In all the stock yards the carrying companies had accumulated such stocks as to make it imperative to reduce the amount of production to conform more closely with the rate of consumption. / The coal men looked for cold weather as an army would look for re-enforcements, while in battle. In a cold snap of some weeks' duration they looked for succor and no little amount of satisfaction is felt because of its arrival. / In speaking of the condition of the trade one who is closely in contact with it said that the present cold snap has made a great difference in the consumption. The orders first doubled but quickly trebled and at the present rate of influx of orders the stocks will soon be consumed and the demand then being greater than the supply, the increase in working hours will have to come in order to keep the two balanced. / The stocks that have been accumulated were supposed to be sufficient for twelve or fourteen days without any further production. The way in which the orders have been coming in the past few days makes it apparent that these stocks will all be consumed by the middle of next week." (Carbondale Leader, February 5, 1898, p. 5)

Interesting arguments on the question of "avoidable" and "unavoidable" waste in coal mining are presented in the following article from the February 21, 1898 issue of the *Carbondale Leader:* 

"THE WASTE IN COAL MINING. / Said in Some Instances to Run as High as Fifty Per Cent. Under Present Methods. / 'Attention is every now and again called to the fact that there is much avoidable waste in the mining of coal, not in this country alone, but throughout all coal mining centres, both at home and abroad,' says the *Iron and Coal Trade Review* It has been estimated that during the last fifty years not more than 30 per cent of the coal in the measures mined has reached the place of consumption. Much of the waste is generally admitted to be due

to the methods employed, and the friends and promoters of coal cutting machinery are usually agreed that the more general adoption of coal cutters would tend to reduce the waste incidental to hand labor. Besides, however, the imperfect work of the miner, the waste of coal in working is, no doubt, largely attributed to: / 1. Miscalculations as to the amount of coal that must be left for the pillars, etc. / 2. The leaving of large amounts of coal unmined in a vein. / 'The loss of coal from miscalculations or bad engineering of the mine is understood to be enormous. Pillars may be too large and the coal wasted, or too small and the pillars crush and shut off the coal beyond. It is not unusual to leave unmined a part of a vein that is either under or above a slate, and which may not be quite so pure as that mined. The waste from this source is large. There are coal mines where, with 71 ½ inches of coal, but 32 inches of clean coal and the bearing-in coal of 4 inches are mined—36 inches out of 71 ½ inches. / The rest is left untouched and means a loss of 35 ½ inches, or, put in another way, practically one-half of the coal is left in the mine, besides the waste of mining. There is in connection with the preparation of anthracite a specially large amount of loss. This is not perhaps so great with bituminous coal, but there are culm and slack heaps about bituminous as well as at anthracite mines. The amount of coal sent to the culm bank in the anthracite region of Pennsylvania since mining began has been estimated at 35 per cent. of the total production or up to a recent date 315,700,000 tons. At certain collieries from the year 1880 to 1883, 20 per cent. more coal went to the dirt banks than was marketed and it was not unusual for an amount equal to 50 to 75 per cent. of total shipments to go to dirt banks. / A recent writer on the subject has pointed out that the loss from this so-called unavoidable waste in mining at the present time is difficult to ascertain. In some instances it is not 10 per cent. in others as high as 50 per cent. or more. This computation refers to the veins actually worked, and to those portions that are worked, and not to those that are in whole or in part regarded as not workable. If this unavoidable waste averaged 20 per cent. of the amount coal produced, the loss from this source in the United Kingdom would be about 44,000,000 tons annually. If the waste for fifty years is considered, the amount would be enormous. / This very serious waste can be reduced. It is being reduced as the results of the application of engineering skill. When the day comes that the near exhaustion of coal will be a thing of tomorrow, and not of a century, it will be found that the waste that is now called unavoidable will then be termed criminal. One of the chief aims of engineering science is to reduce this avoidable waste still further. The adoption of better systems of working should help in recovering coal from other sources of actual or threatened waste. / The chief obstacle in the way of immediate economy is the fact that the present generation rarely deems it to be any part of its duty to look after the future. Indeed, a well known coal owner recently stated that 'there is plenty of coal left, so that we can afford to lose about 30 percent and we are not going to provide for future generations, so long as we can mine coal at a low margin. The moral here laid down is one of expediency for which future generations will unquestionably have to pay a heavy penalty." (Carbondale Leader, February 21, 1898, p. 5)

Two of the regular D&H freight crews were laid off "for the balance of the week," and their trains given to coal crews so that the coal crews might make a fair showing for the month of February, 1898. This commendable juggling of train crews was occasionally done by the D&H—and perhaps other railroads—in slack times. In the *Carbondale Leader* of February 25, 1898, we read:

"ALONG THE IRON RAILS... Several changes were made today in the running of Delaware & Hudson trains south of this city. Two of the regular freight crews were laid off for the balance of the week and their trains given to coal crews in order that the latter may make a fair showing for the month. This is occasionally done in the event of slack times. Conductor Isger will take conductor Storch's train and conductor Kellow that of conductor Wolcott." (Carbondale Leader, February 25, 1898, p. 5)

The 64<sup>th</sup> anniversary of the winning of the first eight-hour day by the United Mine Workers of America in the coal industry, in 1898, was on Sunday April 1, 1962. In the *Scranton Times* of March 28, 1962, we read:

"Historic Day / For the Miners / Sunday [April 1] will be the 64<sup>th</sup> anniversary of the winning of the first eight-hour day by the United Mine Workers of America in the coal industry [in 1898]. It will also mark the 29<sup>th</sup> anniversary of the eight-hour day becoming nationwide in the industry. / Actually the eight-hour day went into effect for most hard coal workers 46 years ago [in 1916]. In some sections of the soft coal fields, April 1 is referred to as John Mitchell Day. However, tribute to the immortal UMWA leader is paid on Oct. 29 in the hard coal areas. The date is a contractual holiday in the anthracite fields. / M. D. Ratchford was UMWA president when the eight-hour day was first won in the Central Competitive Field (Illinois, Indiana, Ohio, and Western Pennsylvania) on April 1, 1898. John L. Lewis, now president emeritus, was head of the union when it was negotiated on an industry-wide basis in 1933." (clipping from the March 28, 1962 issue of the *Scranton Times.*)

Beginning on May 2, 1898, a ton of coal, said the D&H, weighed 2,800 pounds, not 2,700 pounds, the previously recognized weight of a ton of D&H coal. That announcement, in addition to the announcement that any D&H employee who desires to enlist in the service of the United States in the war with Spain will be granted a leave of absence and will, therefore, be able to return to his former post with the D&H at the conclusion of the war with Spain, provided that he was honorably discharged from the service of the United States at the conclusion of the war with Spain, are the content of the following article that was published in the *Carbondale Leader* of April 30, 1898:

"NEW D & H. ORDERS. / A notice has been posted at the various Delaware & Hudson collieries in the city, to the effect that beginning with Monday, May 2, the miners will be obliged

to load twenty-eight hundred pounds of coal for a ton. Heretofore twenty-seven hundred was a ton. / The Delaware & Hudson Coal department has posted notices giving leave of absence to any of their employes who desire to enlist in the service of the United States, with a promise of their position on their being honorably discharged at completion of the war with Spain, but the notice specifically states the company will not pay for service during absence." (Carbondale Leader, April 30, 1898, p.2)

By means of the following ad in the January 3, 1899 issue of the *Carbondale Leader*, J. M. Sherwood, Jermyn, PA, offered for sale chestnut, stove, grate, and buckwheat coal:

"COAL IS CHEAP / WHEN YOU CAN BUY / CHESTNUT, / STOVE and GRATE / At \$2.40 DELIVERED to any part of the city. / BUCKWHEAT AT \$1.20. / Delivered in lots of Two Tons or over / Leave orders at LEADER office or send postal to J. M. SHERWOOD, Jermyn, Pa." (*Carbondale Leader*, January 3, 1899, p.7)

On January 29, 1899, a barn on Pike Street in which 90 fowls were housed sunk about forty feet in a mine cave-in. The cave-in occurred over the 'Donkey Road', one of the old workings of No. 3 shaft, and at a place exactly opposite the No. 5 school. These cave-ins have occurred with alarming frequency all around the site and the residents have just cause for immediate action to correct the problem. In the *Carbondale Leader* of January 30, 1899, we read:

"NINETY LIVES WERE LOST. / Immense Cave-In on the South Side in Which Ninety Chickens Perished. / One of the largest and most disastrous cave-ins that has happened in this section for some time occurred last evening about nine o'clock when the surface of property owned by Patrick Grady on Pike street sunk about forty feet. A barn standing on the property was completely engulfed and crushed as though it was paper. The barn contained ninety fowls, which were the property of Frank McKenna who occupies the premises. The cave is about 45 by 35 feet in size and its edge extends to within six feet of the dwelling occupied by Mr. McKenna and family. / Shortly before nine, the people in the house heard a great noise in the rear which was followed by the cackling of the frightened fowls and upon looking out the barn had disappeared. The cave-in occurred over the 'Donkey Road' one of the old workings of No. 3 shaft and at a place exactly opposite the No. 5 school. / The fears of the residents of that section for the safety of their children who receive instruction there have been again aroused and many are in favor of taking immediate steps toward making an organized effort to have the school board cause an examination of the old workings under the school building. The caves have occurred with alarming frequency all around the site and the residents have just cause for immediate action. / In Mr. McKenna's case the question as to who shall remunerate him for this life stock lost in the cave-in arises and the opinions of the people in that vicinity are divided, some thinking that the landlord should settle and others claiming that the Delaware & Hudson company should assume the damages incurred." (Carbondale Leader, January 30, 1899, p. 5)

In the February 16, 1899 issue of the *Carbondale Leader*, the annual report by Inspector Roderick for the First Anthracite District (between Providence and Forest City) for 1898 was published. Here is an analysis of that report that was published in the *Carbondale Leader*, February 16, 1899, p. 5:

"IN THE FIRST MINE DISTRICT. / Inspector Roderick's Annual Report as to Various Happenings—Statistics. / The Annual report of Edward Roderick, mine inspector for the First Anthracite District, lying between Providence and Forest City, has just been finished. The report would have been out some time ago, but Mr. Roderick was waiting for the report of an injured man in this city. A report in full has been made to the chief of the bureau at Harrisburg after each accident, causing much clerical work and reduction somewhat the annual report. / During the year there were 51 fatal accidents and 126 non-fatal, with an output of 127,760 tons of coal for each fatal accident. / The total quantity of coal mined in 1898 was 6,515,790 tons, an increase of 265,957 tons over the output for 1897. / The average number of days worked per man was 153.3 against 165.4 in 1897 showing a slight decrease in time made by the men. The total number of men employed in this district was 17,890. / The 51 fatal accidents left 30 wives widows and 77 children orphans. Not one of these accidents occurred on the main or traveling roads, all of them occurring at the face of the gangways or breasts. A remarkable fact is that no more than one man was killed at any of these accidents. A great many of them happened while the men were barring down coal or by falling timbers. Out of the 177 accidents, 97 were caused by the fall of rock and coal. / During the year 215,590 kegs of powder of 25 pounds each were used and 149,874 pounds of dynamite. There was but one life lost in using this immense quantity of explosives and the victim was an old and experienced miner, who carelessly rammed the charge in with the head of a drill. Twenty different causes go to make up the number of men killed or injured. / Among the men employed in mining in this district fourteen nationalities are represented, showing a very cosmopolitan population [emphasis added]. / Mr. Roderick makes mention in his report of the serving of an injunction on the Elk Hill Coal and Iron company to compel them to build a second opening in the Richmond mine. The injunction was granted and the mine ceased operations until the new shaft was in operation. Following close on the opening up of the mine for operations came the burning of the Richmond No. 3 fan house which happened on the afternoon of July 28. Twenty-three men were working in the Dunmore vein and made their escape out of the new shaft. If this shaft had not been built, the inspector says, these men must have smothered, as there was no other outlet. / Among the improvements of the year noted in the report, are the erection of a new breaker on the site of the burned Riverside breaker at Peckville, and a new breaker and washery, with a capacity of 2,000 tons per day, built at Olyphant by the Delaware and Hudson company, new air shaft for the Marvin and Calico collieries, and a 20-ton compressed air engine for haulage purposes at the Leggett's Creek colliery. Coal drills run by compressed air; were introduced by the Elk Hill Coal company in the Richmond No. 3. Culm is being successfully slushed into the old Grassy Island and Eddy Creek workings, and also by the Mount Jessup company in their slope workings. / The following table shows the production of coal, the shipments, and average days worked by each company.

| Names of mines  | Production                 | Shipments      | Days W'ked    |  |
|-----------------|----------------------------|----------------|---------------|--|
|                 | D. & H. C. CO.             |                |               |  |
| Leggett's Creek | 221,378                    | 195,762        | 190.25        |  |
| Marvin          | 301,749                    | 278,166        | 192.25        |  |
| Eddy Creek      | 206,104                    | 187,672        | 175.25        |  |
| Olyphant No. 2  | 94,487                     | 87,212         | 91.25         |  |
| Grassy Island   | 198,238                    | 179,482        | 186.00        |  |
| White Oak       | 194,638                    | 190,226        | 183.75        |  |
| Jermyn          | 228,958                    | 219,942        | 154.25        |  |
| Powderly        | 75,401                     | 68,230         | 189.00        |  |
| No. 1 shaft     | 129,155                    | 96,847         | 189.75        |  |
| Coal Brook      | 287,461                    | 280,988        | 177.50        |  |
| Racket Brook    | 158,433                    | 156,033        | 191.50        |  |
| Clinton         | <u>209,100</u>             | <u>198,292</u> | <u>178.75</u> |  |
| Totals          | 2,305,102                  | 2,138,852      | *174.80       |  |
|                 | HILLSIDE COAL AND IRON CO. |                |               |  |
| Names of mines  | Production                 | Shipments      | Days W'ked    |  |
| Glenwood        | 100,816                    | 89,273         | 116.50        |  |
| Erie            | 123,585                    | 107,229        | 124.00        |  |
| Keystone        | 41,515                     | 40,599         | 147.00        |  |
| Forest City     | 263,232                    | 177,456        | 120.50        |  |
| Clifford        | 129,707                    | 215,332        | <u>124.00</u> |  |
| Totals          | 658,855                    | 629,889        | *126.00       |  |

#### **COMPANIES**

| Names of mines    | Production | <b>Shipments</b> | Days W'ked |
|-------------------|------------|------------------|------------|
| Edgerton Coal Co. | 140,363    | 131,462          | 112.3-10   |
| Nor'west Coal Co. | 214,478    | 204,818          | 147.8-10   |
| E. H. C. & I. Co. | 143,123    | 123,999          | 107.9-10   |
| Moosic Mt. C. Co. | 103,032    | 94,983           | 148.00     |
| Blue Ridge C. Co. | 159,857    | 144,293          | 168.8-10   |
| Sterrick C. Co.   | 130,490    | 121,708          | 116.3-10   |
| Franklin C. Co.   | 48,347     | 40,388           | 144.2-10   |
| Riverside C. Co.  | 46,144     | 30,944           | 47.6-10    |
| Russel B. C. Co.  | 3,300      | 8,200            | 105.00     |

The accidents were classified as follows: Fall of rock, 30 fatal and 48 non-fatal; fall of coal, 4 fatal and 15 non-fatal; by cars inside, 9 fatal and 31 non-fatal; by premature blast, 1 fatal and 4 non-fatal; by mules, 1 fatal and 4 non-fatal; by electric shock, 1 fatal; by falling down shaft, 1 fatal; by breaker machinery, 2 fatal and 3 non-fatal; by being drawn through coal schutes, 1 fatal; by cars outside, 1 fatal and 1 non-fatal; by explosion of gas, 2 non-fatal; by flying coal from shots, 7 non-fatal; by falling in breakers, 2 non-fatal; by explosion of caps, 1 non-fatal; by falling wall, 1 non-fatal; by explosion of powder, 2 non-fatal; by falling trestle, 2 non-fatal; by carriage, 1 fatal and 1 non-fatal; by being struck with rope and shaft bar, 2 non-fatal." (Carbondale Leader, February 16, 1899, p. 5)

A summary statement for 1898, produced on the basis of the reports of the mine inspectors in the eight anthracite districts in Pennsylvania to the State Department of Internal Affairs, was published in the *Carbondale Leader* of April 7, 1899. In that statement, the very interesting observation is make that "the bulk of the Delaware & Hudson Canal Company's coal reaches tidewater over a railroad [the Erie] that it does not own." Here is that summary statement:

**"FORTY MILLION TONS OF COAL** / All of the Anthracite Reports Have Been Submitted—The Amount Mined During 1898 / The reports of the mine inspectors of the eight anthracite districts have all been submitted to the State department of Internal Affairs. . . The total shipments of coal for the year: 41,899,751 tons, of which 13.4 percent—5,613,186 tons—

are identified as "D. & H. and Lack.". The average selling price of D. & H coal was \$1.84 per ton. The cost of mining per ton as reported by the D. & H was \$1.35. The cost of mining, transportation and marketing per ton of coal by the D. & H was \$1.75: mining, \$1.31 or 76.6% of total cost; marketing, \$0.41 or 23.4% of total cost. . . We may recall, however, that the bulk of the Delaware & Hudson Canal company's coal reaches tidewater over a railroad which it does not own—the Erie—and that it is known to have a very advantageous contract for transportation [emphasis added]. The fact seems to be that, whatever profits may accrue to middlemen and others engaged in the trade, the net return to the anthracite operating companies is very small." (Carbondale Leader, April 7, 1899, p. 5)

A misplaced switch in the Wilson Creek mines caused a trip of coal cars to be thrown onto the wrong rails. A fifteen-year old driver in those mines, Will Thompson, was caught between those cars and the ribs of the mine and injured seriously. The worst injuries were to his head and face, which were badly crushed and cut. His right shoulder was also broken. Here is the accident report that was published in the *Carbondale Leader* of July 20, 1899:

"Will, the fifteen year old son of Andrew Thompson of Wilson Creek, while employed at his work as driver in the Wilson Creek mines received quite serious injuries. He was drawing a trip of cars along a track when they were thrown on the wrong rails by a misplaced switch and Will was caught between the cars and the 'ribs' of the mine. He was removed to his home and Dr. Malaun of Carbondale was called. Ten stitches were necessary to close the gash." (Carbondale Leader, July 20, 1899, p. 5)

The high cost of mine powder was a concern of all mine workers, especially since they were required to buy the powder that they used from the company for whom they worked. The point was made by the miners, in August 1899, that considerable money is expended each month for the consumption of powder by the miners in this locality, and after other expenses, including the wages of the laborer are paid by the miner out of the sum allowed him for each car of coal mined, little profit remains. The big coal companies heard the concern, but took no action on the question in August 1899. In the *Carbondale Leader* of August 2,1899, we read:

"CONCERNING MINE POWDER. / Question of the Purchase of This Necessity to Underground Workers May Result in a Strike. / While it is to be hoped that Scranton will not be subjected to another strike for a long time, it is generally known that the miners employed in the various Delaware, Lackawanna & Western collieries are seriously considering the powder question, which has long caused dissension between employer and employe. At the mass meeting to be held Friday night some definite action will probably be taken, and it is estimated

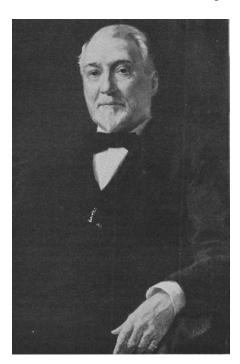
that the meeting will be attended by fully 1,000 miners. / THE POWDER QUESTION. / The object of the session as has been previously stated is to discuss the powder question, which for years past has greatly agitated the consumers of this material. It is their intention to have the price of powder per keg, which contains about 25 pounds and is sold by this company for \$2.75, reduced at least \$1, or \$1.25. They claim that the amount asked for powder per keg is exorbitant and greatly interferes with their financial success in the mine. / [emphasis added]. / Should the company refuse to change the price of powder there seems to be but little doubt that the miners will make a demand to be granted the privilege of purchasing the powder wherever they see fit. / THE SITUATION. / Superintendent Loomis was interrogated in regard to the powder question. He would not express the company's attitude but said some things which are interesting. The demands of the men as they are understood by the representatives of the company really means an increase of wages [emphasis added]. While such a demand from Delaware, Lackawanna & Western miners alone might be conceded without wrecking the road or the company, yet the powder question is one of great proportions and one in dealing with which its far reaching effects must be fully considered. / OF GREAT EFFECT. / Any movement at this time on the part of any company would greatly affect other companies and the individual operators would suffer much from any change at this time. The price of coal has not advanced any of late, while the cost of material has thus been pulling down its profits and the individual operator feels this. An increase in wages, or, in other words, the granting to the men their demands in regard to the powder, he said would work havoc. The coal trade is in a delicate condition. Every effort is being made to get the representatives of the companies in New York together. There are yet a few unruly members, but it is expected that they will come together soon and then some things can be divulged that can not be at this time. The trade is in a better condition than it has been for a long time, yet it is not in such shape that it can withstand a very rough assault upon it." (Carbondale *Leader*, August 2, 1899, p. 2)

In a tragic accident on August 25, 1899, Alva Tompkins, Jermyn, was killed instantly in the Erie mine when a large slab of rock just over the back of his head fell upon him without warning and pinned him to the ground. Here are the details on this accident that were published in the *Carbondale Leader* of August 25, 1899:

"ROOF FELL ON HIM. / Alva Tompkins, a Jermyn Miner Killed Instantly Yesterday Morning. Was at Work in the Erie Mine. / JERMYN, August 25. /Alva Tompkins a well known miner met instantaneous death in the Erie mine at 8 o'clock yesterday morning. The colliery was idle yesterday but Mr. Tompkins who the day before had taken his wife and family to the Nay Aug park excursion decided to go to his chamber with his fellow miner and two laborers. / He had only entered the place a few moments and set his drill to work in a hole when he noticed a piece of 'buck' overhead which he thought best to bar down. He was in the act of doing this when a large slab of rock just over the back of his head fell upon him without warning and pinned him to the ground. His fellow workmen endeavored to lift the rock up. It was more than they could manage. They obtained the assistance of two other men and even then the five

men could only with the greatest difficulty remove the slab. / The unfortunate man was, however, killed instantly and his remains were taken to his wife and family, who are almost heart broken, on Bacon street. / The deceased who was thirty-eight years of age was a man of splendid physique and was held in highest esteem by the people of the borough and general regret is expressed at his sad and untimely death. There were few happier homes in the borough than Alva Tompkins' and the sorrow cast upon it by yesterday's deplorable accident time alone can dispel. / He has been a resident of this borough for the past twenty-one years and in addition to a wife and six children of tender years is survived by three brothers John, Sherman and George and three sisters Mrs. Howard Elmore, Mrs. Stewart and Mrs. Goodrich of Olyphant. / The funeral will take place at 2 o'clock tomorrow afternoon. Services in the First Baptist church. The members of James Stuart council No.703, Jr. O. U. A. M. will attend the funeral and will hold a special meeting at 7 o'clock this evening to make arrangements for that purpose." (Carbondale Leader, August 25, 1899, p. 5)

March 13, 1903: Robert M. Olyphant declined re-election and David Wilcox was elected president. On May 3, 1918, at age 93, Robert M. Olyphant died. Here is a copy of the likeness of Robert M. Olyphant, President of the D&H, 1884-1903, that is given in *COP*, p. 286:



In an initiative to put local coal speculators in Carbondale out of business, the D&H raised the price of coal to \$6.50 per ton (except for D&H employees who could get coal for \$2.50 per ton).

This unusually high price for coal, it was expected, would be prohibitive to speculators and put them out of business. When that goal had been achieved, the normal price of D&H coal would then be asked by the company. Here is the announcement about these price changes that was published in a Carbondale newspaper on January 3, 1903.

"COAL AT \$6.50 A TON. / Prices Raised by Delaware and Hudson to Stop Speculating. / For the first time in the history of Carbondale—the city wherein the anthracite coal industry had its birth—the price of coal has soared to the sky-high price of \$6.50 per ton. This flighty figure was announced by the Delaware and Hudson company on Saturday and covers all sizes of coal There is one condition to these prices—the employes of the company are excepted. As is the rule, they are favored and can procure all the concentrated sunshine they need for \$2.50 per ton. / Though the public is howling over this unexpected boosting process, there is an assurance that it will not last long. The purpose of the raise and the immediate effect aimed at are to put local coal speculators out of business. As in other places hereabouts for the past two months, junk dealers and others have turned into coal dealers, shipping coal to points where there is crying need of anthracite and securing prices that have netted them thousands of dollars. These crafty ones not only procured coal themselves, but enlisted the help of every one they could who would get a load of coal for them. It was an easy matter to demand cars for shipping, and thus continued the practice until it not only became a nuisance, but a hardship on the local trade, which had to wait on the pleasure of the speculators to be supplied with coal. To wipe out this discrimination, the Delaware and Hudson company decided on the radical step of placing a price on coal that would be prohibitive to the speculators. When this practice is given its death-blow, the price of coal will come down to normal again. At least this is hinted in official circles, with the further intimation that the hoped-for drop will occur within a few days." (clipping in Gritman scrapbook dated "Saturday, January 3, 1903")

William H. Williams, D&H Vice President and a Manager of the D&H since 1912 (and up to 1923, at least, and perhaps longer), in his remarks titled "Anthracite Development and Railway Progress," at the D&H Centennial Luncheon at the Hotel Casey in Scranton on April 24, 1923, noted that the weight of water pumped from deep mines was generally much greater than the weight of coal removed, ranging from twice to twenty times the weight of coal. For D&H mines, he noted, for every ton of coal that is prepared and sent to market, the company elevates fourteen tons of water. He said:

"This company elevates to the surface fourteen tons of water for each ton of coal that is prepared and sent to market from its mines. The mine tracks, under ground, in its collieries, have a combined length of 650 miles, or more than two-thirds the length of the great railway system that has been developed as an incident to the marketing of the coal. <u>Each miner is a shipper,</u> who must have several mine cars delivered one at a time during the day, and 20,000 of these cars have been loaded and unloaded in one working day. / Anthracite is recovered from ten to twelve

superimposed beds at a single operation, each bed extending over an area of from eight to ten square miles, making a total of from eighty to one hundred twenty square miles for one colliery operation. Owing to the greater depth of anthracite mines and the complicated and costly apparatus required in the preparation of hard coal, the present cost of a new operation, capable of an annual output of one million tons, is about \$8,500,000, for the anthracite region; while in the bituminous fields the average cost of a plant capable of similar output would be approximately \$2,500,000." (COP, p. 574).

Fourteen tons of water for every ton of D&H coal: On that question, it will be of interest to take a close look at the enormous pumping station that was located underground in the borough of Jermyn. A very interesting article on this question, "Pumping a Billion Gallons," was published in *The Delaware and Hudson Railroad Bulletin*, June 1, 1936, pp. 92-94. Here is that article:

# Pumping a Billion Gallons

That's What Jermyn Colliery Apparatus Did During March Flood



36" pipe delivering 33,000 gal. per min.

C EALED in the solid rock nearly 300 feet beneath the village of Jermyn, Pa., is one of the largest pumping stations in the world. Its capacity is conservatively rated at 48 million gallons of water per day, which is sufficient to supply the needs of two cities the size of Scranton or Albany. Normally it is operated eight hours a day to bring to the surface all the water seeping into the anthracite mines in the entire area between Simpson, one-half mile north of Carbondale, and the point where the Archbald coal bed crops out at the surface half a mile below Jermyn, some 61/2 miles from Simpson. All the billions of gallons of water which annually find their way into these workings are conducted through a drainage system to a great underground lake or sump, which is situated directly over the pumping station and approximately 250 feet below the ground level.

Under normal conditions only part of the pumping equipment is required to keep the underground reservoir empty, operating from 11 P. M. until 7 A. M., when the demand for electric current for other purposes is not as great as in the daytime. However, beginning March 13, when flood conditions on the surface caused the accumulation of over 300,000,000 gallons of water in the sump, every pump in the station was continuously operated at capacity for the first time over any considerable period. When normal operation was resumed April 6th, a total of over 1,000,000,000 gallons had been forced up and into the Lackawanna River through a single 36-inch pipe.

The purchaser of anthracite little realizes that for every ton of coal produced by The Hudson Coal Company, an average of 21 tons of water must be pumped to the surface so that mining operations may be carried on. In July 1922 the

Jermyn Colliery workings were so badly flooded that it was decided to install a pumping station at that point with sufficient capacity to prevent a recurrence. The project was completed and placed in operation in 1933 and, prior to March 1936, it was seldom necessary to keep all the pumps operating continuously for 24 hours. So much water entered the workings this year, however, that the entire battery was run at capacity for 583 consecutive hours. If the station had not been built, all the underground mine openings at and in the vicinity of Jermyn Colliery would have been filled with water.

To give a clearer picture of the problem which the company's engineers faced in 1922, it may be stated that all snow and rain water falling in the upper Lackawanna Valley is naturally drained by streams which lead into the Lackawanna River, which eventually empties into the Susquehanna at Pittston. Mining operations have necessitated the cutting of such a network of underground passageways that, if it were not for caves and robbed areas, it would be possible for a person to go from Forest City to a point several miles south of Wilkes-Barre without coming to the surface, or about 32 miles. These man-made "burrows," together with cave-ins, allow surface water to seep down into the lower mine workings. and unless it is pumped out again, all underground operations would be "flooded out."

Beneath the surface at Jermyn Colliery are seven veins of coal, each of which has been partially removed. They are linked together by mine slopes and tunnels so that water drains into the spaces in the Archbald bed from which the coal has been removed. This vein of coal is 10 feet thick. averages one mile wide, and is nearly 11/2 miles long on Jermyn property. Due to the extent of voids caused by first mining it would be possible for 1,000,000,000 gallons of water to accumulate underground at Jermyn Colliery alone and more than twice that amount in the whole underground area tributary to the Jermyn sump before it ran out of the Bottom Grassy Bed Manway located near the O. & W. station at Jermyn. Because this overflow point is 9.8 feet below the entrance to the slope leading to the concealed pumping station, the pumps cannot be flooded from any accumulation of water in the underground workings.

Once this system of draining all water into one

huge underground basin had been worked out, a pumping station of sufficient capacity to keep it empty under the worst flood conditions which might prevail had to be designed. The plans called for a battery of eight electrically-driven, centrifugal pumps, located approximately 270 feet below the Lackawanna River into which they were to discharge.

The first step in building it was the sinking of a slope 700 feet long, by 16 feet wide, and 8 feet high, through solid rock and four veins of coal, on a grade of 39 per cent. This slope is divided lengthwise by a tile and brick wall: one half houses the 36-inch discharge pipe and electric power lines; the other a stairway and a 28-inch gage railroad track over which the machinery and pipes were lowered in cars, operated by means of an electric hoist.

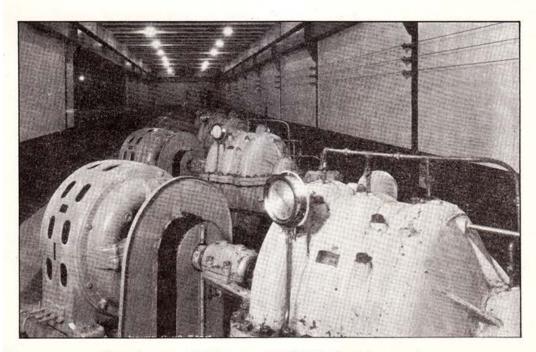
At the foot of the slope the solid rock was excavated to form a room 200 feet long, 22 feet wide, and 30 feet high, to house the pumps, pipes, and valves, with a wing 40 feet long, 12 feet wide, and 16 feet high, for the electric control panel and additional piping.

Water from the sump enters at the top of the pump through three 36-inch pipes. The drains leading into the intake pipes are located at different levels in the Archbald bed, the highest being about 11 feet above the lowest. Normally the pumps are run until the lowest intake is covered with water. This spring, however, the water rose to a level of 50 feet above the highest intake pipe at one time, and all pumps were kept running continuously for 24 days.

The pumps include: four 5,000-gallon-perminute units, each consisting of two single-stage pumps in series, driven by 500-horsepower, 2,300-volt induction motors; and four 3,000-gallon-perminute, three-stage pumps, powered by 300-horsepower motors of the same style. A ninth unit, rated at 1,000 gallons per minute, is used to remove water which leaks from valves, pumps, or pipes and accumulates in a sump sunk below the pipe level at the far end of the room.

The pump room is ventilated by a large fan, direct-driven by a 40-horsepower motor. Fresh air is sucked down into the room through the track side of the slope, passes through the pumproom, and is expelled through the pipe-line side of the slope.

All the 36-inch pipes are wood-lined and fittings lead-lined to prevent corrosion by the naturally formed sulphuric acid in the water. Smaller pipes, as well as fittings are lead-lined or of bronze con-



These 8 pumps will deliver over 48,000,000 gallons of water a day

struction, while the valves are also of bronze which resists the action of this chemical. The necessity for priming the pumps was eliminated by locating them below the level of the water they were to remove.

As we conclude this look at corporate coal operations of the Delaware and Hudson Canal Company, it would be interesting to take a closer look at the Hudson Coal Company, which was a wholly-owned, independently managed subsidiary of The Delaware and Hudson Company.

The Hepburn Act of 1906 placed restrictions on the sale across state lines of coal that had been produced in railroad-owned mines.

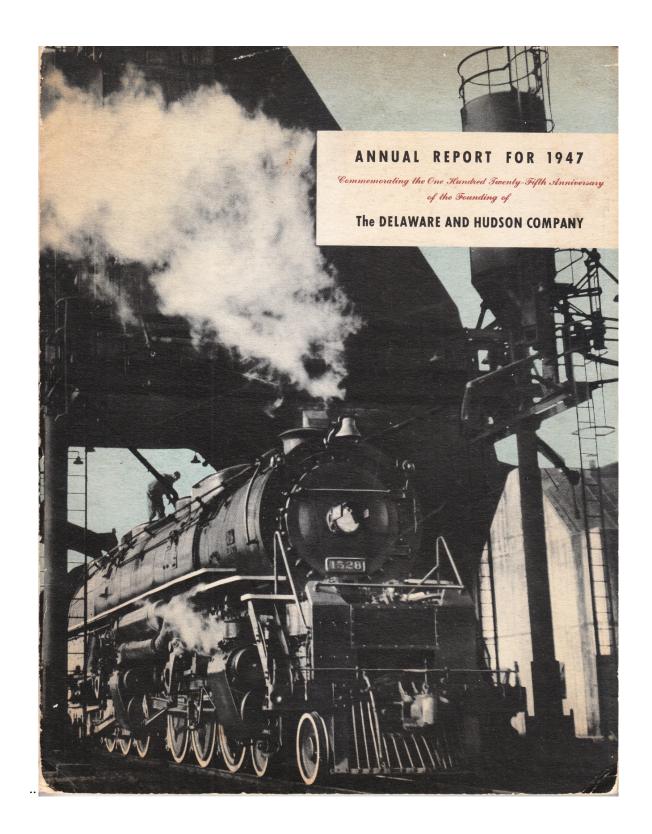
In 1909, the Supreme Court said that coal sales across state lines would be permitted if the coal was first sold to another company, even if this second company was in part or totally owned by the railroad.

That being the case, the D&H contracted with its subsidiary, the Hudson Coal Company, to buy outright all D&H coal produced at the pit mouth.

In the October 2016 issue of the *Bridge Line Historical Society Bulletin*, in the article "The Delaware & Hudson [in 1945]," pp. 36-42, 44, by W. T. Coniff, on pp. 36-37 of that article, we read the following about the Hudson Coal Company:

"The Hudson Coal Company, a D&H affiliate, with its 14 mines and six breakers, contributes more than 125,000 cars to the freight movement every year. With more than 650 miles of underground track and 275 electric mine locomotives and more than a thousand mules stabled underground to move its mine cars, the Hudson Coal Company is quite a railroad operation in its own right, and employs 9000 men in its extensive workings."

Shown below is the cover page of *Annual Report for 1947* of The Delaware and Hudson Company and the material presented therein about the Hudson Coal Company:



# Annual Report for 1947



Commemorating

the One Hundred Twenty-Fifth Anniversary
of the Founding of

The Delaware and Hudson Company



#### THE HUDSON COAL COMPANY

This wholly owned, independently managed subsidiary, is the third largest producer of anthracite coal in the country. It owns and operates a number of collieries in the so-called Wyoming Anthracite Field, generally between Wilkes-Barre and Carbondale, Penn sylvania. All collieries are located on the lines of The Delaware and Hudson Railroad.

The Company has maintained its relative position in the anthracite industry and during the past decade heavy expenditures have been made for modernization and mechanization, particularly in the Loree and Olyphant Collieries. This includes the installation of modern and up-to-date machinery such as new jigs, new tile-lined loading pockets, Chance Cones, renewal of narrow gauge tracks with heavier rail to accommodate electric locomotives, the installation of machinery for mechanical loading in place of hand loading, the purchase of new mine cars, the electrification of underground pumps, the introduction of air-driven percussion coal drills and electrically driven rotary drills. Eighty-nine percent of the coal is now mechanically loaded.

The Hudson Coal Company was the first coal-producing company to use the medium of television to promote its product. From an article in *The Safety Commentator* (Volume 13, No. 3, June, July, August, 1950), the Hudson Coal in-house publication, we learn that the Hudson Coal Company had at that time "three one-minute television reels of film which carry the message of Hudson Coal and Automatic Anthracite into thousands of homes in the Troy-Albany-Schenectady area, as well as in the Binghamton-Scranton area."



"... ours [Hudson Coal Company] is the first producing company to make use of this most modern medium [television] of advertising."

#### SALES ANGLE

HUDSON COAL, an old and honorable name in the fuel business, is flashing very brightly on many a television screen these evenings — another Hudson Coal first — for ours is the first producing company to make use of this most modern medium of advertising.

At the present time, the Sales Department has three one-minute television reels of film which carry the message of Hudson Coal and Automatic Anthracite into thousands of homes in the Troy-Albany-Schenectady area, as well as in the Binghamton-Scranton area. The Hudson spots are telecast over WRGB-tv in Schenectady on Tuesdays between 6:30 and 6:55 P.M., and Thursdays and Fridays at about 6:20 P.M. The schedule over WNBF-tv in Binghamton is 10.30 P.M. Thursdays, following the Ford Show and preceding the Kelvinator program; and 7:30 P.M. Sundays, following "Garraway at Large," the Congoleum program, and preceding the Lucky Strike Show.

The telecast over the Schenectady station is potentially receivable on more than 100,000 sets, with heaviest concentration between North Adams, Mass., and Ft. Plain, New York, and from Whitehall, New York, to Catskill, New York. There is partial reception reported from such distant points as Plattsburg, INew York, Malone, New York, Middlebury, Vt. and Torrington, Connecticut. While television has a rather limited coverage compared to straight radio, there can be little doubt concerning its effectiveness. Television is already making sales history for many of America's best known products. The effectiveness of television in selling Hudson Coal remains to be proven, of course, but there is every reason to believe it will be an important asset in the general sales program.

In Canada, one of the most important markets for Hudson Coal, the Sales Department has recently finished distribution of a brand new manual on Advertising, Merchandising and Selling Hudson Coal. Similar only in intent and purpose to the current merchandising manual now in the hands of our U. S. dealers, this Canadian volume is the first such book ever published by any producer solely for Canadian use, another major "Hudson first."

The use of the singular "book" is not strictly accurate for actually, there are two separate editions, one in English, and one in French. The Province of Quebec is predominately French, and all the Hudson literature and advertising material must be made available there in two languages.

The publication of this Canadian book has spurred considerable interest among our Canadian dealers in the effective use of Hudson advertising material. Hudson is very well known in Canada for a number of reasons. We have every intention of making Hudson Coal an equally famous household word — in French as well as English.

Speaking of Hudson Coal, have you noticed the new seals at the entrance of the main office? Or on the big billboards on the main aproaches to Scranton? It's HUDSON COAL now. supplanting Lackawanna Anthracite — HUDSON COAL, modern streamlined trademark of a modern high grade fuel. Easy to pronounce clearly, an important matter in radio advertising, and easy to recognize visually which is important on television, the new seal introduces another chapter in the rich history of merchandising, advertising and selling Hudson Coal.

To commemorate the centennial of the incorporation of the City of Carbondale on March 15, 1851, several parades were held in Carbondale. Shown below is the Hudson Coal Company float in one of those centennial parades in 1951:



*Hudson Coal Company Float in March 1951 Centennial Parade*. Newspaper clipping in the Mizianty Collection at the Carbondale D&H Transportation Museum.

The Hudson Coal Company had a police force. Shown below is a photograph, courtesy of John V. Buberniak, of Hudson Coal Company Police badge No. 1. This badge was sold on E-Bay for \$265 on December 6, 2015:

# Hudson Coal Company police badge No. 1:



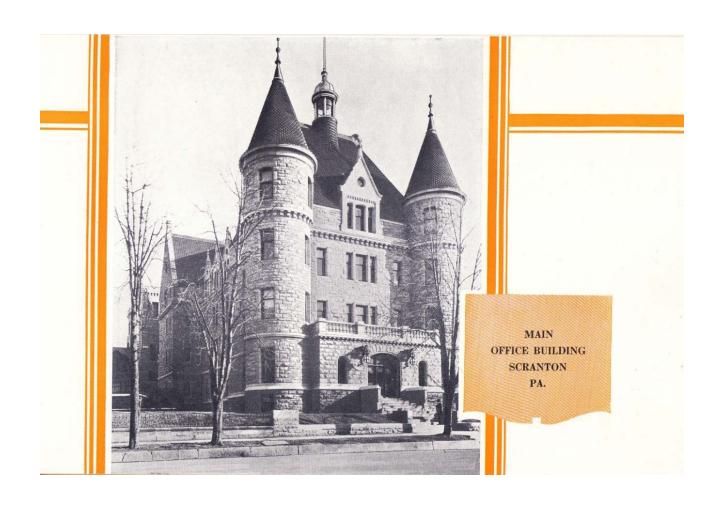


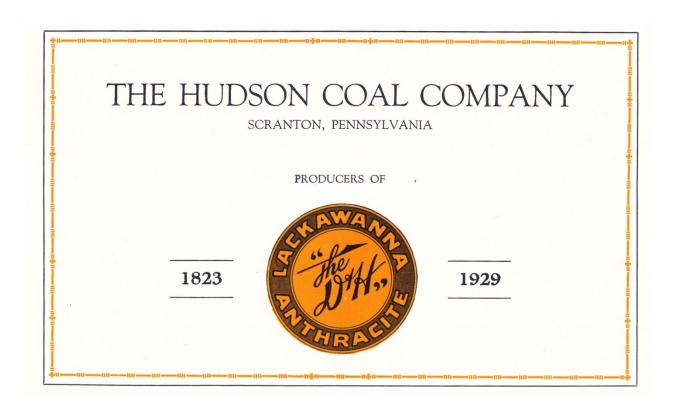
On November 21, 1960, the Hudson Coal Company, along with all its assets, physical property, name and good will, were sold to Blue Coal Corporation of Maine, a subsidiary of Glen Alden Corporation.

Once the anthracite coal was above ground, so to speak, from the 1850s on, it was sent to a breaker, where it was prepared for market. The next volume in this series will focus exclusively on the many breakers in the anthracite fields.

In the meantime, let's take a quick look at mining and breaker operations in general in the anthracite fields of northeastern Pennsylvania, as presented in The Hudson Coal Company booklet given below:







Very interesting numbers about the Hudson Coal Company: operates 22 mines and 11 breakers; produces 12% of total anthracite mined; employs 20,000 men.



# THE HUDSON COAL COMPANY



WNS and operates twenty-two mines; and eleven breakers at which its Anthracite is prepared for market. It produces approximately 12% of the total Anthracite mined. 20,000 men are employed, three-fourths of whom normally work underground. The yearly production of the celebrated "D&H Lackawanna Anthracite" is normally 250,000 railroad cars, which if made into a single train would reach from New York City to Denver, Colorado.

The yearly excavation is equivalent to a tunnel 8 feet high, 20 feet wide and over 400 miles long.

#### Transportation

There are underground in our mines more than six hundred and fifty miles of railroad track, on which are used 275 electric locomotives and 1,100 mules.

On this enormous underground railway system are 5,000 chambers, or miners' working places, to

which empty cars must be placed, and from which loaded cars must be removed, on an average of three times daily. Each day this railroad moves more than 45,000 tons of material from 5,000 stations (miners' chambers).

#### Water

The passage ways underground must all be driven on a grade so that water seeping into the mines will drain to one central point where it can be collected and pumped to the surface. Enormous underground lakes covering hundreds of acres are formed in this way.

Our Company pumps approximately ten tons of water per ton of Anthracite, or eighty to ninety million tons of water per year. However, in order to take care of the rainy season in the Spring, it is necessary to have a pumping capacity of 311,155,200 tons. In other words, the pumps of our Company are more than sufficient to furnish

Six hundred and fifty miles of railroad track underground in Hudson Coal Company mines; 275 electric locomotives, 1,100 mules.

### THE HUDSON COAL COMPANY----Continued

the entire water supply for eight cities of the size of Boston, Worcester, and Springfield, Massachusetts, and Albany, Schenectady, Utica, Syracuse, and Rochester, New York.

#### Ventilation

Each man and animal working underground must be provided with at least 200 cubic feet of air per minute, according to the State Mine Law. We use much more air than this in ventilating the mines and keeping noxious gases from accumulating. It takes 5,000,000 cubic feet of air per minute to ventilate our operations, or nine tons of air per ton of Anthracite.

#### Preparation

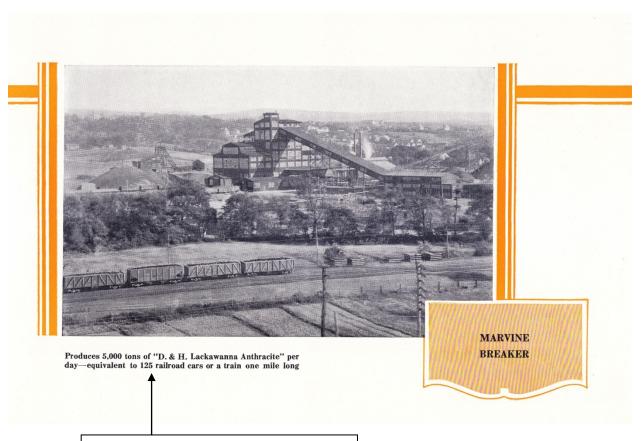
The raw material from the mines undergoes an extensive manufacturing process or preparation before shipment to the retail dealer. A modern breaker (manufacturing plant) which crushes,

sizes and cleans Anthracite, costs approximately \$2,500,000.00.

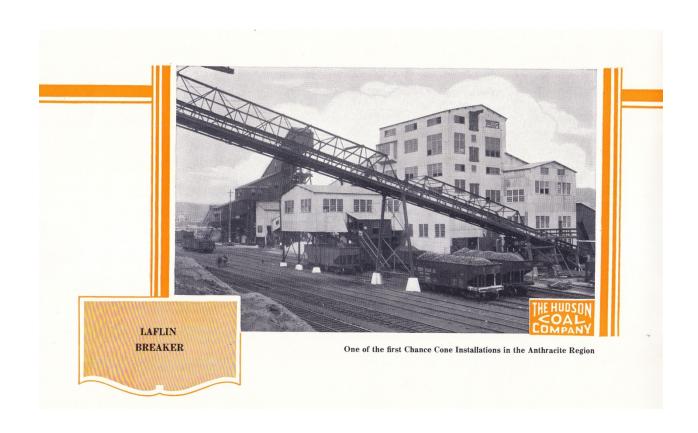
#### Cost of Anthracite

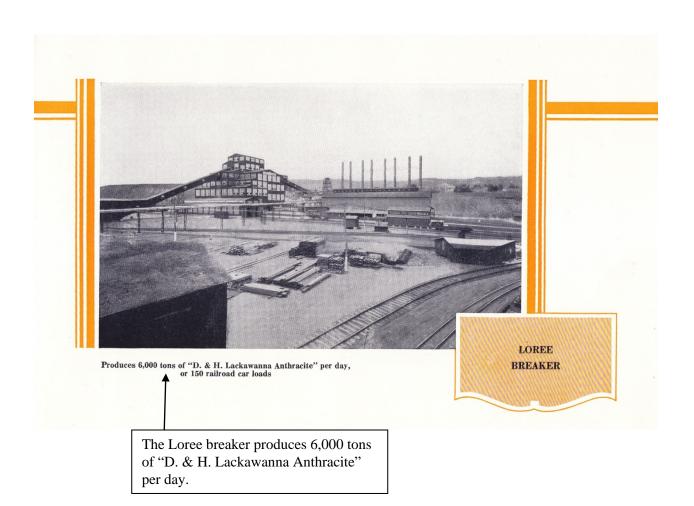
Taking figures from the cost of living in the United States, compiled and published for the National Industrial Conference Board, we find that one hour of labor in a textile industry, today, will purchase 40.5% more Anthracite than it would in 1914. One hour of labor in the paper and printing industries will purchase 19.1% more Anthracite than in 1914. In the chemical industry, one hour of labor will purchase 20.4% more Anthracite than it would in 1914. Likewise, in the leather industry, one hour of labor will purchase 25.5% more Anthracite than in 1914.

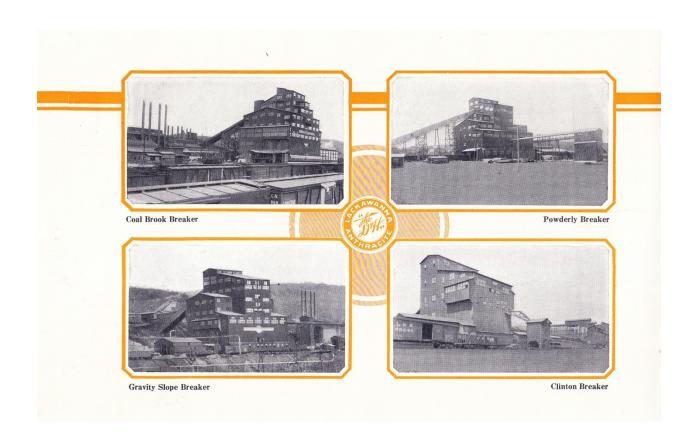
That Anthracite is cheaper today, in comparison with wages, is entirely due to the advances made in mining and preparation within recent years.



Marvine Breaker: Produces 5,000 tons of "D. & H. Lackawanna Anthracite" per day—equivalent of 125 railroad cars or a train one mile long.





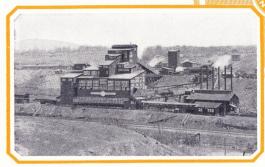




Pine Ridge Breaker



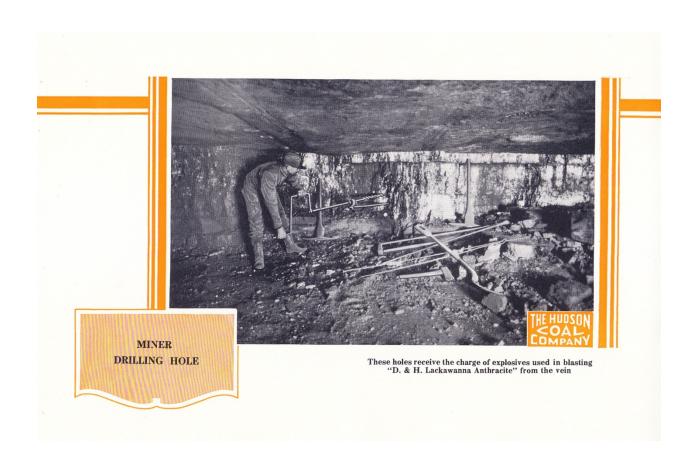
Olyphant Breaker

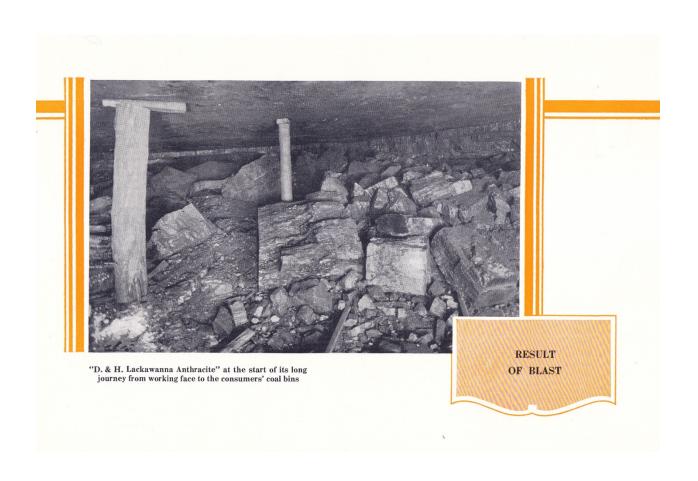


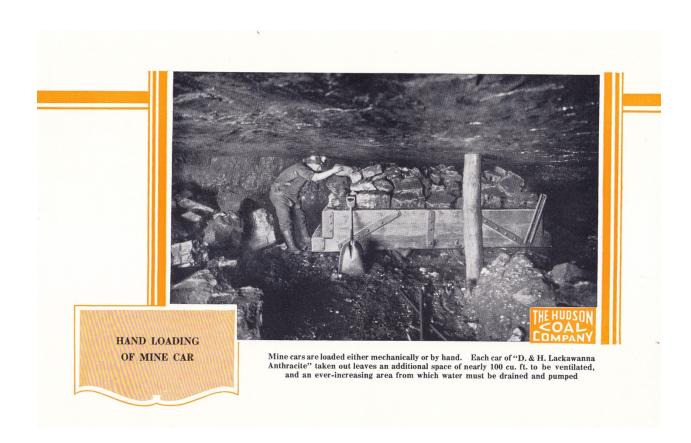
Greenwood Breaker

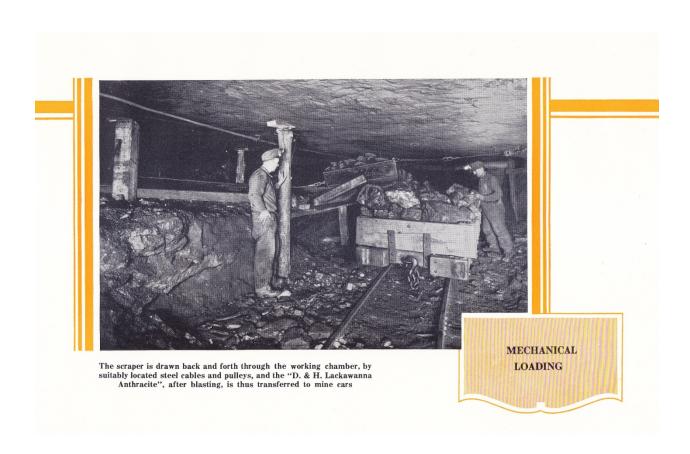


Baltimore Breaker

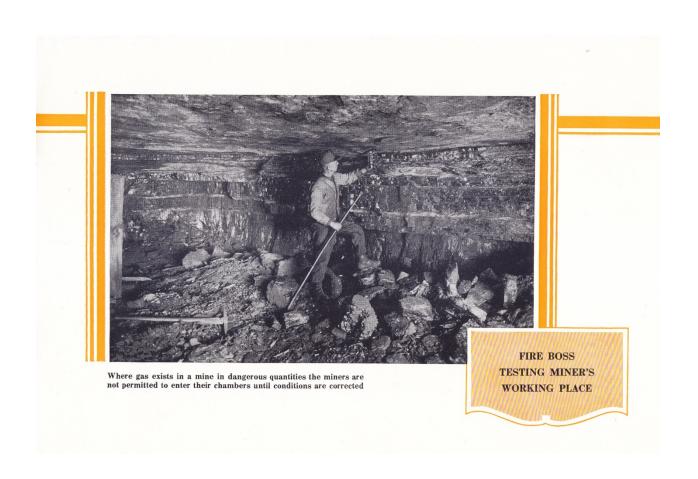


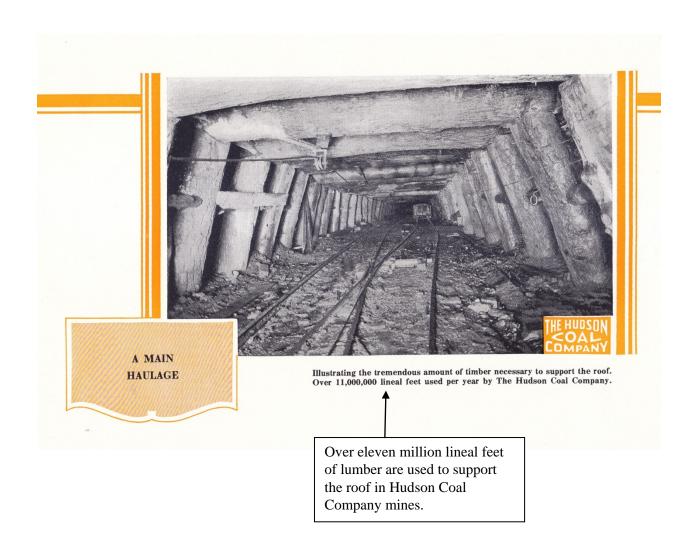


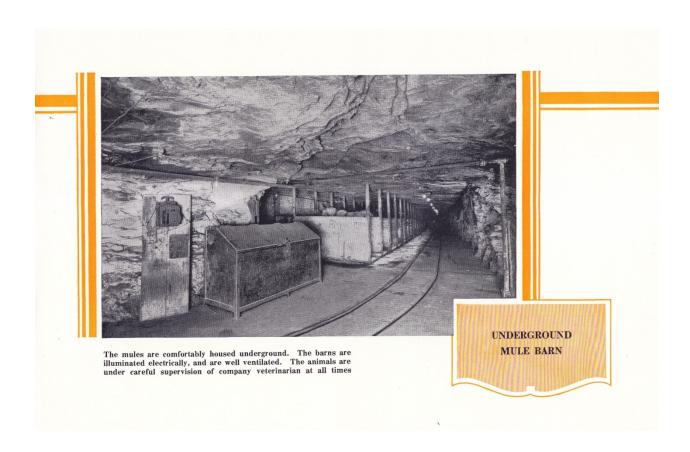


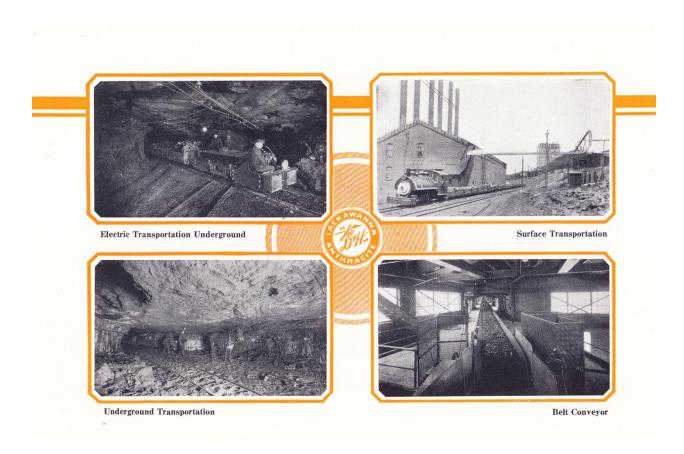




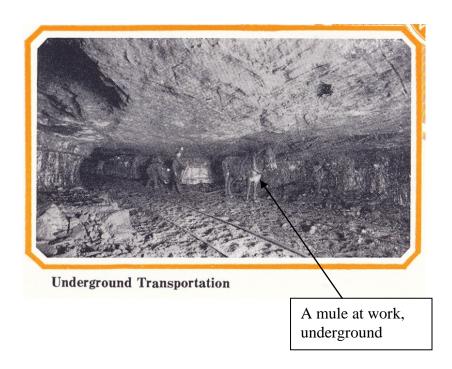


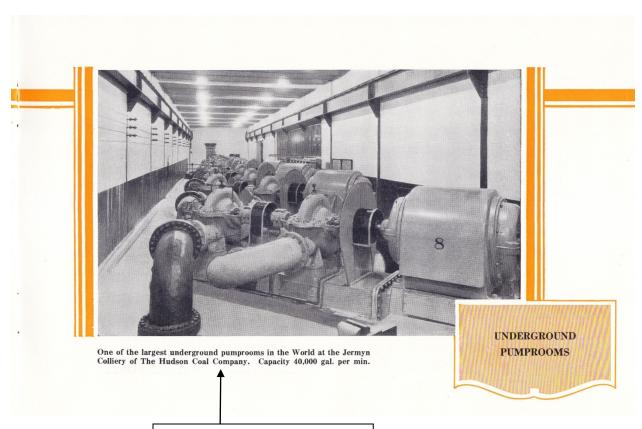






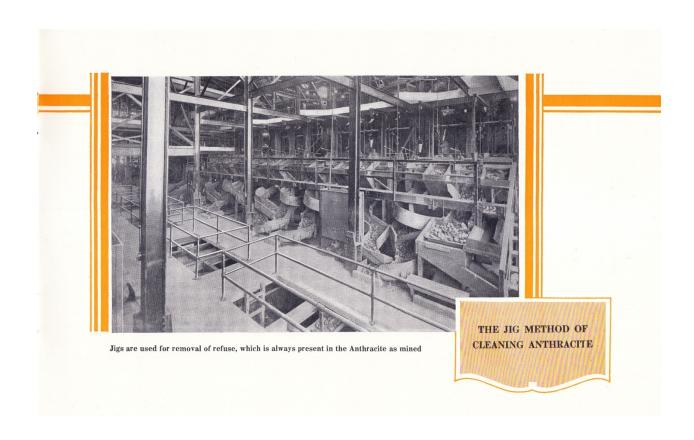
## Enlargement of photo on the preceding page:

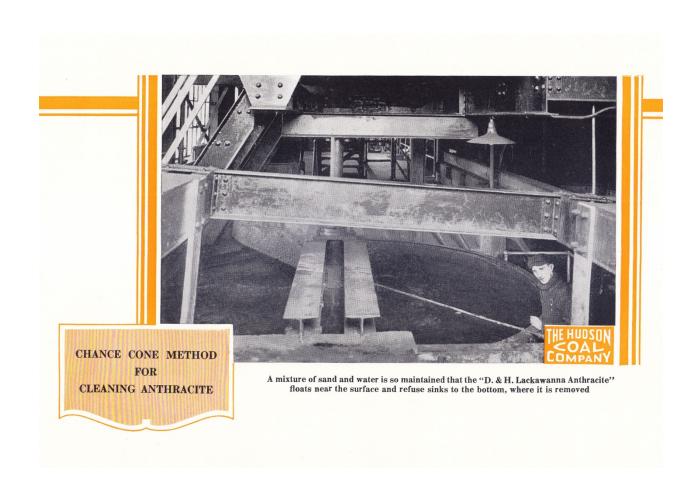


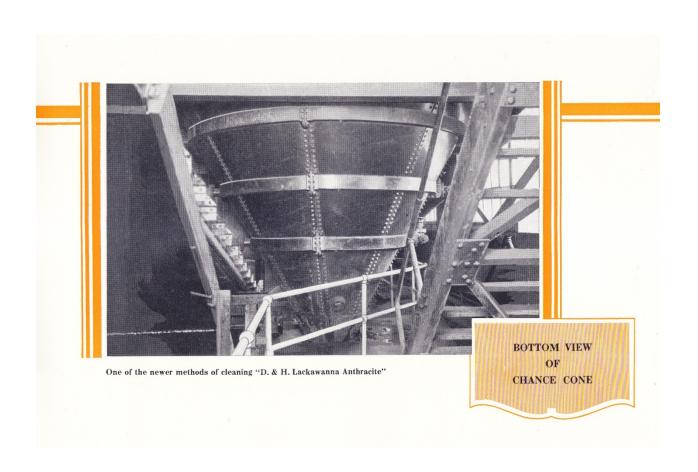


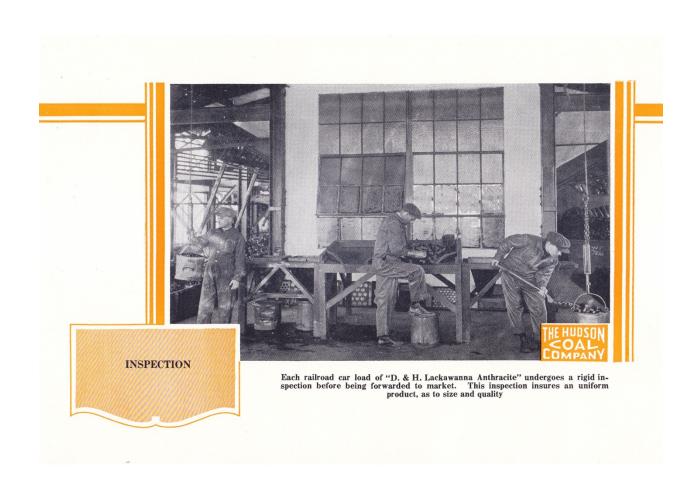
See "Pumping a Billion Gallons," *The Delaware and Hudson Railroad Bulletin,* June 1, 1936, pp. 92-94; reprinted in this volume on pp. 310-313.

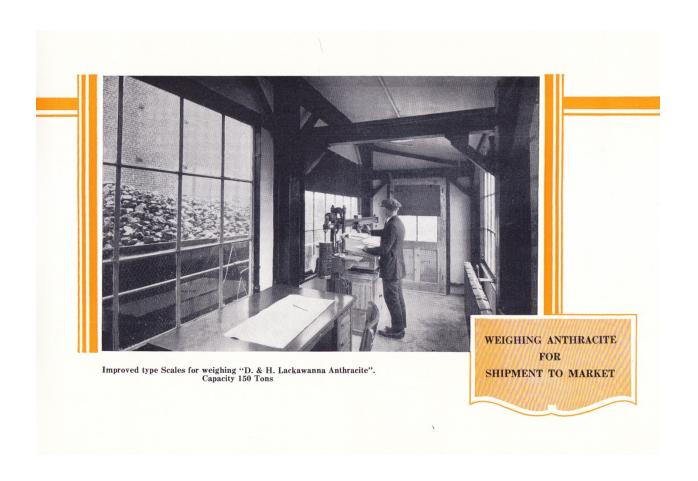


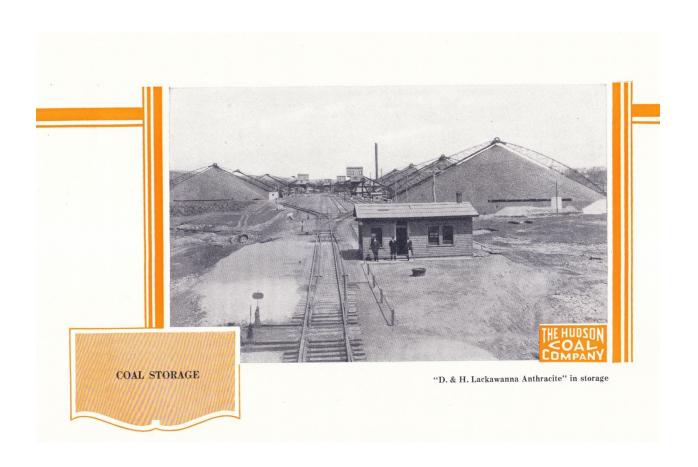


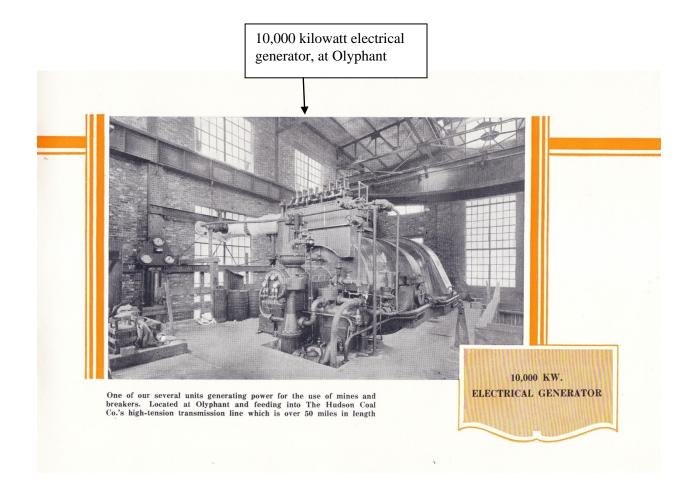












ence, research, and improvement. It is the safest, most economical and convenient Fuel.

The large Hudson Coal Company organization stands squarely behind their dealers and through them the consumers, in servicing "D.& H. Anthracite."

Ask your coal merchant for this superior household fuel.

There is a size manufactured for every use.



Last page in the Hudson Coal Company booklet:

INTERNATIONAL TEXTBOOK PRESS SCRANTON. PA.

Given below is a Hudson Coal ink blotter from 1940 that was sold on E-Bay on March 11, 2017:



Shown below are three photos (color slides, Kodak transparencies, dated November 1963; photos by Harold F. Beal, Jamestown, NY). of Hudson Coal mining equipment, location unknown. These photos were sold on E-Bay on December 21, 2016.







When out of the breaker, coal was broken, cleaned, and sized and ready for sale. There are nine commonly accepted sized of coal. They are described in *The Delaware and Hudson Company Bulletin* of June 15, 1929 as follows:

"There are nine commonly accepted sizes of coal, namely: lump, which includes any pieces larger than four inches in diameter; broken or grate, including pieces ranging between four and two and one-half inches in diameter; egg, two and one-half to one and three-quarters; stove, one and three-quarters to one and one-quarter; chestnut, one and one-quarter to three-quarters; pea, three-quarters to one-half inches; buckwheat, one-half to one-quarter inches; and rice and mustard-seed are even smaller."The City of the Black Diamond, Part III. Civic and Industrial Growth [of Wilkes-Barre]," *The Delaware and Hudson Company Bulletin*, June 15, 1929, pp. 181-182, 189)

Shown below is a Lackawanna Anthracite display/sales item that was sold on E-Bay on September 1, 2015. Six different sizes of Lackawanna Anthracite are featured in this unit: egg, stove, nut, pea, buck, and rice:





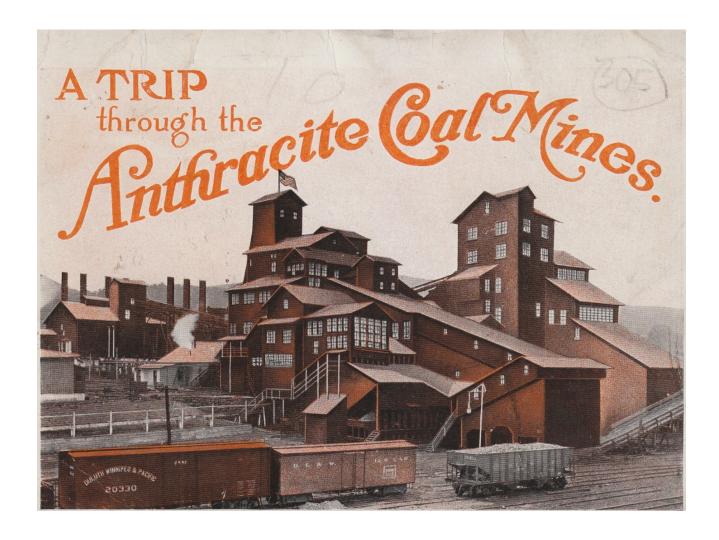




1716

## Visiting a Coal Mine and a Breaker

In an effort to educate the general public about the worker-friendly environment of coal mines and breakers, the coal companies, in the twentieth century, produced promotional materials about their work places, as for example the following accordion post card flyer titled "A Trip through the Anthracite Coal Mines," which was produced in 1913 by Jones & Evans, 402 Susquehanna Avenue, Olyphant, PA (flyer in the collection of the Carbondale D&H Transportation Museum):



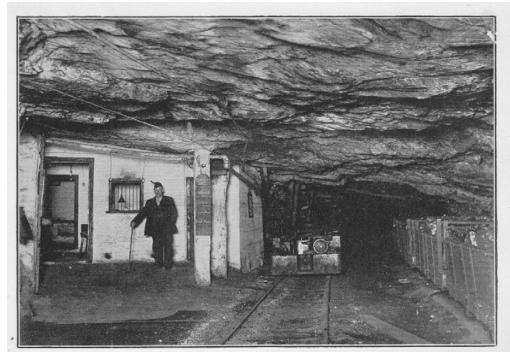


Copyright, 1913, by Jones & Evans

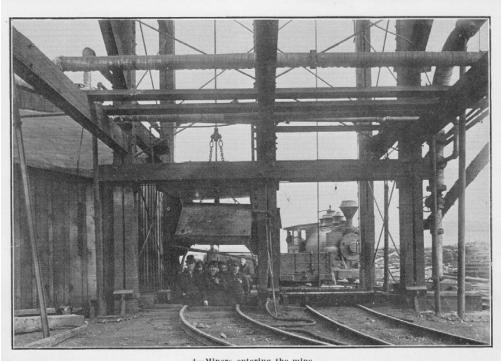
1-Fire boss examining the mines.



2—Finding a large fall.



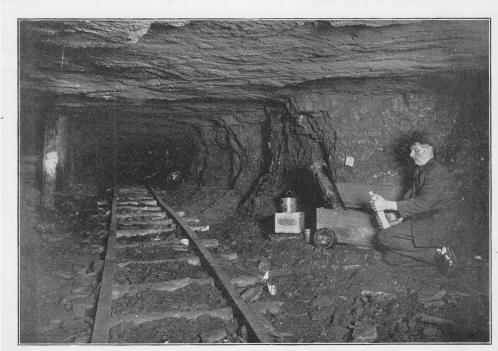
3-Fire boss returns to office after examination.



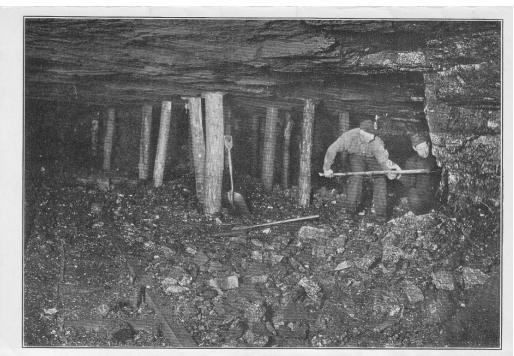
4-Miners entering the mine.



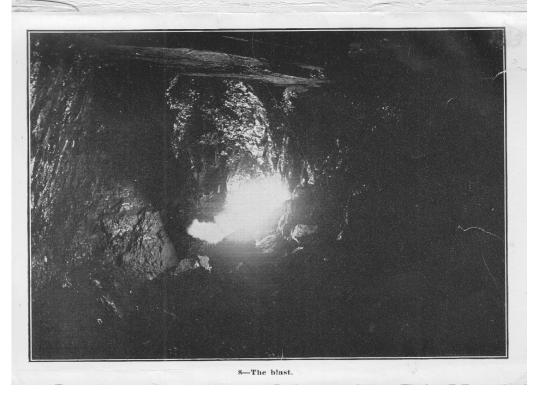
5-Miner boring hole, laborer loading car.

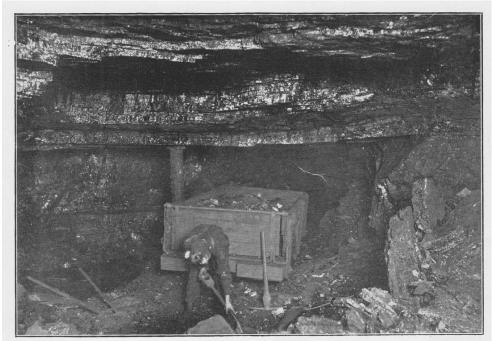


6-Preparing powder for blast.

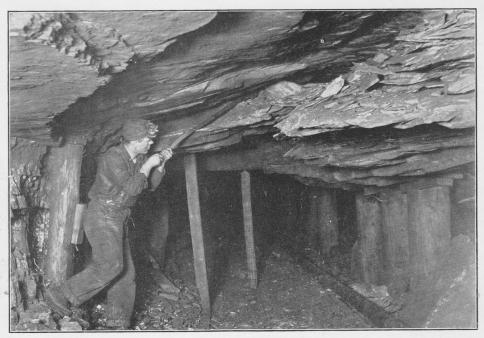


7-Robbing pillars. Placing powder in the hole, tamping column to confine

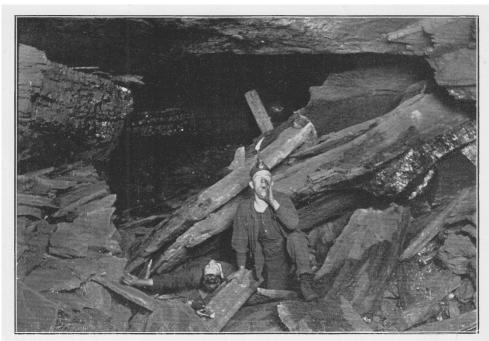




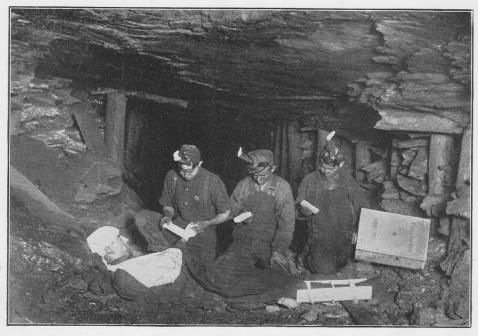
9-Dislodgement of coal after blast.



10-Barring down bad roof.



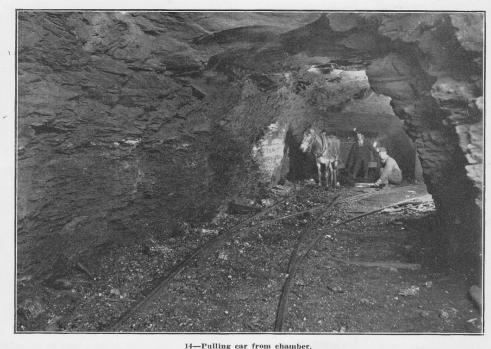
11-The miner is caught under fall,



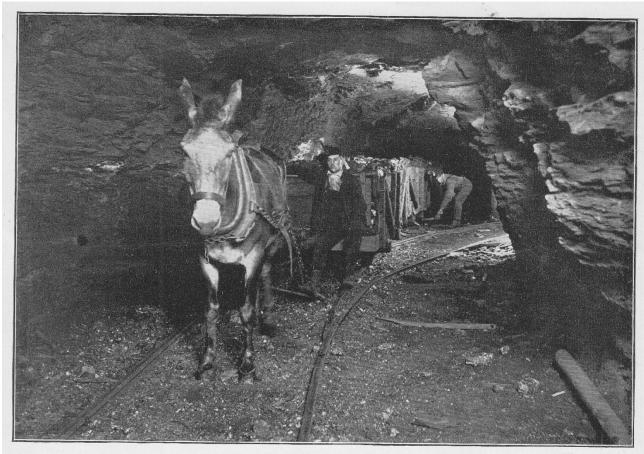
12-First aid to injured miner.



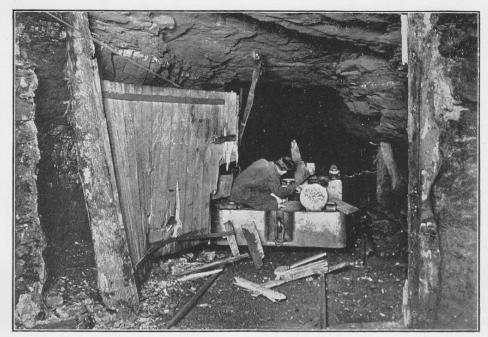
13-Treatment at mine hospitals.



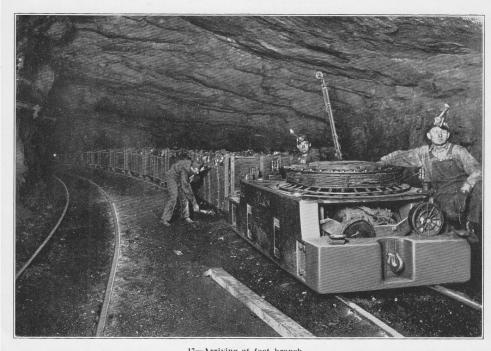
14-Pulling car from chamber.



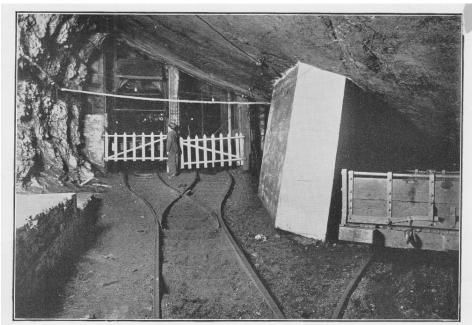
15-Trip prepared for motor.



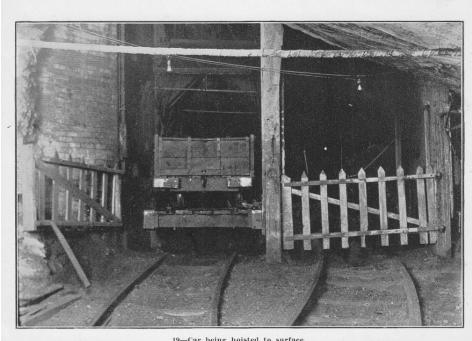
16-Losing control. Motor breaks door.



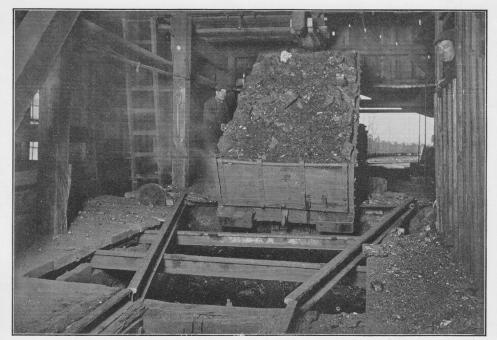
17-Arriving at foot branch,



18-Foot of shaft where coal is brought to be hoisted,



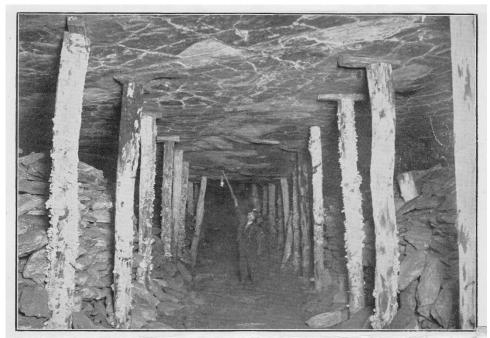
19-Car being hoisted to surface.



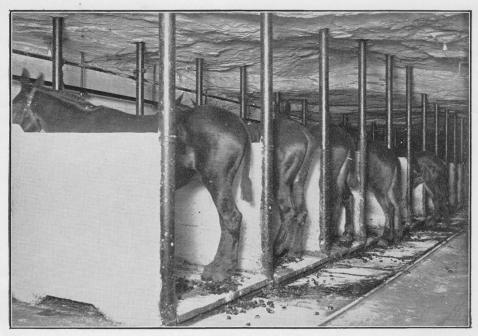
20-Dumping coal into breaker with steam power.



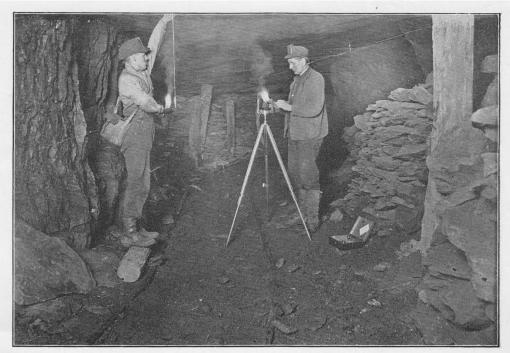
21-Last process. Breaker boys picking slate from coal,



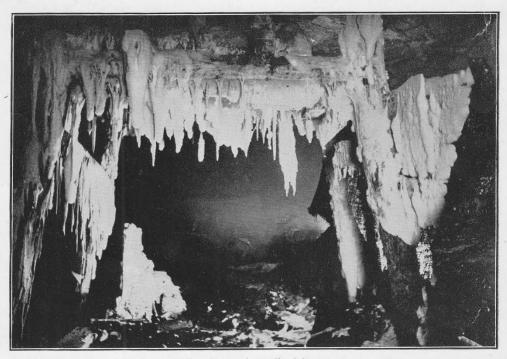
22-Fire boss in abandoned workings.



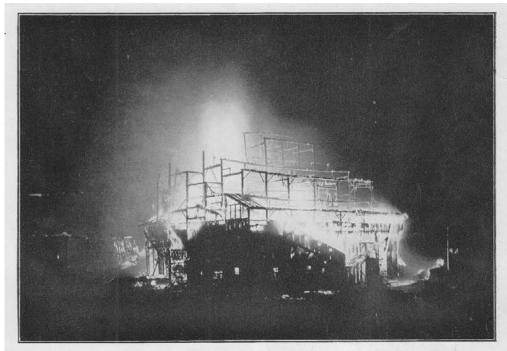
23-A fireproof mule barn.



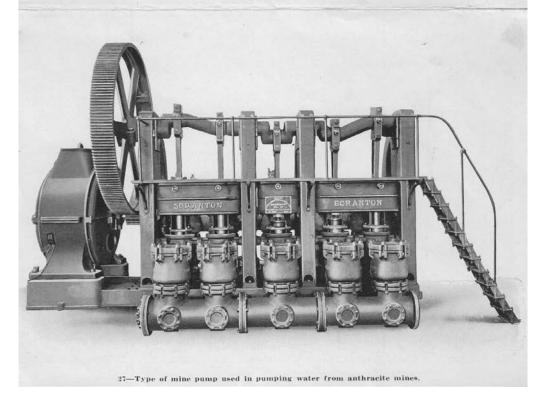
24-Foreman placing points for chamber course.



25--Twenty years' growth of fungus.

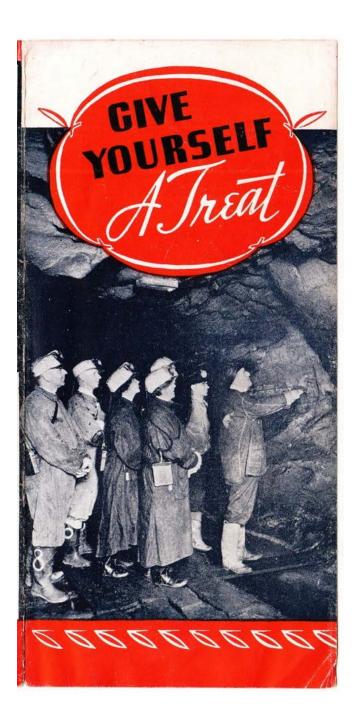


26-A burning breaker at night.



Visiting a coal mine was, in fact, a recommended activity "on your way home" from the 1939 World's Fair: The flyer shown below is in the holdings of the Carbondale D&H Transportation Museum:

## 1939 World's Fair:



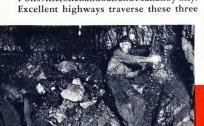
# Visit an ANTHRACITE MIME on your way home from the

Give yourself a treat on the way home from the New York World's Fair!

One of the most unusual experiences of your life will be a trip through an Anthracite mine. Deep down in the bowels of the earth, beneath towns, farms and rivers, you will see thousands of men at work digging, cutting and blasting Penn-

sylvania hard coal from the rich veins which Nature deposited in this one small section of Northeastern Pennsylvania-an area of about 484 square miles.

The Anthracite Region is divided into three sections: the Northern Region, near the cities of Scranton and Wilkes-Barre; the Middle Region near the cities of Hazleton, Freeland and McAdoo; and the Southern Region near the cities of Pottsville, Shenandoah and Mahanoy City.



regions, and you can reach them easily on your way home from the Fair. Seven major railroads afford convenient service, and air transport service is also available.

A trip through a mine is one that you will not soon forget. Nature deposited Anthracite in rich layers which lie from fifty to several thousand feet below ground. You go into the mines on an elevator, just as you come down from an office building. When the elevator reaches the proper level, you walk onto electrically lighted "streets", along which miles and miles of electrified mine railroads run. As you walk along these "streets", the rich veins of Anthracite can

be seen along the walls. When you come to one of the chambers in which men are working, you will be amazed to note the thorough provisions made for the comfort, safety and

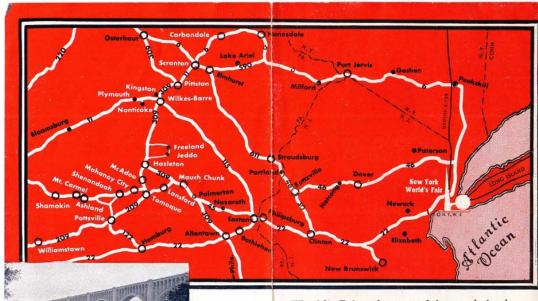






convenience of the men. Each miner is equipped with his own electric lamp and battery, which provides him with additional light. You will be interested in the "safety lamps", with which the miners are equipped, for the detection of "fire damp"; and the unusual provisions for the circulation of fresh, clean air. You will be amazed, too, at the evenness of the temperature below ground - it is never cold in the Wintertime, and never hot in the Summer.

After your visit below ground, you will be shown through the breaker-or "factory." Few people realize that Anthracite is a manufactured product. After it is taken from the ground, it is put through a series of processes which clean the coal, size it for the particular needs of various types of heating plants, and remove any impurities that may have been brought up. For every ton of Anthracite



"... go through an Anthracite mine and breaker—it is an experience that you will never forget. It is very impressive, clean, and perfectly safe."

mined it is necessary to pump twenty tons of water from the mines.

Be sure to take advantage of this opportunity to go through an Anthracite mine and breaker-it is an experience that you will never forget. It is very impressive, clean, and perfectly safe.

On your way home from the New York

World's Fair, take one of the roads leading through the Anthracite Region. The Secretaries of the Chambers of Commerce will be glad to make arrangements for you to enjoy this experience.

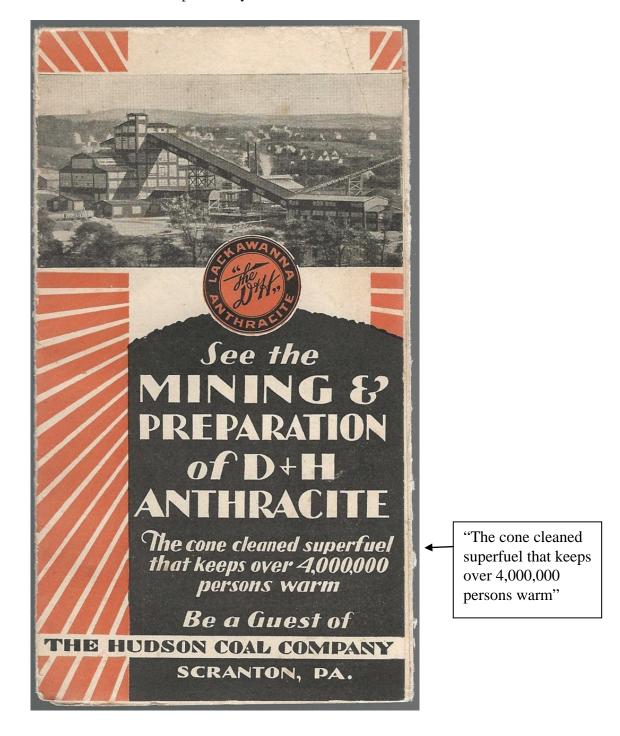
Hazleton, Pa. - - - - Frank Mantz 226 Markle Bank Building Pittston, Pa. - - - - Charlotte Evans 21 Old Post Office Building

Pottsville, Pa. - - - - R. C. Bevan
9 South Center Street

Scranton, Pa. - - - Raymond B. Gibbs
Chamber of Commerce Building
Shamokin, Pa. - - - - E. T. Barr
Unger Building, Market and Walnut Sts.
Wilkes-Barre, Pa. - - - J. A. Bolender
Miner's National Bank Building

EXHIBIT OF COMMONWEALTH OF PENNSYLVANIA NEW YORK WORLD'S FAIR 1939

A visit to the Marvine Breaker was also a possibility for those who wished to do so.



Notice the delegation of visitors to this anthracite mine.



QUALITY BEGINS HERE The celebrated D&H Cone-Cleaned Anthracite at the start of its long journey from the rich underground deposits to the consumers' coal bins.

FOR a most interesting and educational trip, you are invited to be a guest of The Hudson Coal Company, at Marvine Colliery, Scranton, Pa., one of the most modern breakers in the Anthropite Pagion

of the most modern breakers in the Authracite Region.

The Visitors' Reception Room at the colliery is open every day from 8:00 A. M. to 5:00 P. M. Upon entering the Reception Room you will receive a cordial welcome. Here you will be provided with free guide service, cap, miner's lamp and protective clothing. miner's lamp and protective clothing. You are afforded the opportunity to inspect the curious fossils which have



PARTIAL MAP OF THE CITY OF SCRANTON, PA.

been collected; also, the miniature complete model of a modern breaker and a cross section of the different methods

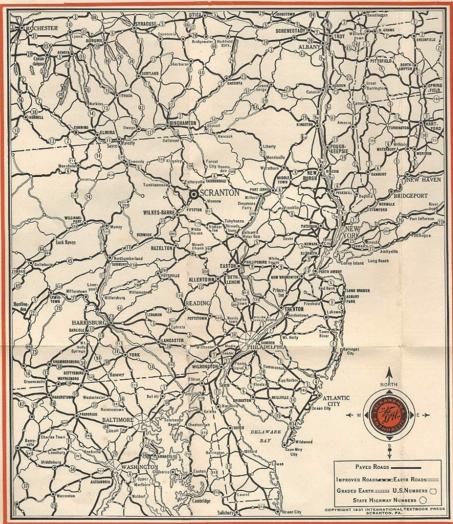
cross section of the different methods used in blasting coal.

The trip itself starts at the mine entrance, and your competent guide will direct you through the underground chambers. He will explain the various mining processes, timbering methods, etc., presenting a vivid story of the underground operations. He will tell underground operations. He will tell

you why it requires approximately 3,500,000 cubic feet of air per minute, or approximately 16 tons of air per ton of coal mined, for underground ventilation... why it requires 400 miles of underground track and 300 electric locomotives to haul 30,000 tons of material from 1,400 miner's chambers daily, the yearly excavation being equivalent to a tunnel 8 feet high, 20 feet wide and 200 miles long. He will tell you why this company alone pumps approximately 27 tons of water per ton of coal, or 127,000,000 tons of water per year . . . or, expressed in an-



UNDERGROUND TRANSPORTATION It requires 400 miles of track and 300 electric locomo haul the coal removed from 1,400 miners working places.



other way, a volume of water sufficient to furnish the water supply of the following cities—Boston, Worcester and Springfield, Massachusetts; Albany, Schenectady, Utica, Syracuse and Rochester, New York, with a large excess available for other purposes.

Following the visit to the mines, your guide conducts you to the shaft and explains how the coal is brought to the surface on the mine carriages. You will walk along the conveyor line which carries the coal to the breaker . . . this conveyor line is 2,200 feet long



CONE-CLEANING PROCESS

A view of the new Cone-Cleaning process used in cleaning D&H Anthracite. Coal actually floats on the top of a mixture of Sand and water while the impurities sink and are discarded. and 4 feet wide, travels 300 feet per minute and is capable of handling 1,100 tons of material daily.

The walk along this conveyor line leads you to Marvine Breaker which is 120 feet high and has sufficient capacity to prepare 5,000 tons of D&H Anthracite daily. This breaker is one of the most modern in the Anthracite field. Here, your guide points out the expensive and massive machinery which breaks the large lumps of Anthracite and separates it into the usable market sizes. He describes the Cone-Cleaning process in which all unburnable impurities are removed from the run-of-mine coal. In this process, you see the coal actually float in a mixture of sand and water. The impurities which are heavier than the coal and the mixture, sink to the bottom and are discarded on the waste piles.

After your trip through the breaker you see the inspectors take a sample of coal from nine points from every railroad car. This sample must pass a rigid inspection or the entire car of coal is condemned and the coal is re-prepared.

Following your trip through the mines and breaker, your guide escorts you to the Equipment Laboratory where the most modern Automatic Anthracite burning equipment, automatic controls and regulators are displayed under actual operation.

Here, various types of Anthracite Stokers which feed the coal into the fire and mechanically remove the ashes can be seen as

cally remove the ashes can be seen as well as several types of service water heaters and the AGA Stove which is the last word in cooking efficiency.

From the Equipment Laboratory you return to the Visitors' Room while your guide explains that The Hudson Coal Company owns and operates 14 mines and 6 breakers, producing approximately 10% of the total Anthracite sold. Approximately 9,000 men are employed at these operations, three-fourths of whom work underground. The yearly production of D&H Cone-

Cleaned Anthracite is about 125,000 railroad cars, which, if made into a single train, would reach from Portland, Maine past Washington, D. C.

You will leave Marvine Colliery with memories of an unusual experience and a knowledge of why D&H Anthracite has made thousands of "warm friends" throughout the Anthracite consuming territory.

So—plan now to spend a pleasant and interesting hour in the Anthracite Region. Marvine Colliery is located on Route 6, Roosevelt Highway, within the City limits of Scranton, and situ-



RIGID INSPECTION

Each car receives a rigid inspection before it is permitted to leave the breaker. The new process of preparation plus the rigid inspection enables The Hudson Coal Company to guarantee a product of unsurpassed quality.



UNDERGROUND PUMPROOMS

One of the largest underground pumprooms in the World at the Jermyn Colliery of The Hudson Coal Company, Capacity 40,000 gal. per minute.

ated one mile northeast of Providence Square on North Main Avenue. The map in this folder shows the exact location. Everything is provided without charge and your visit places you under no obligation.

PRINTED IN U.S.A.

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## The Specific Jobs of "Miners"

In the August 14, 1998 issue of *The Advantage*, Charles P. Kumpas, in his article "Jobs of Miners," makes the very interesting point that many people who are identified by their descendants as "miners" were not in fact "miners." Here is that article:

"It is surprising to many to learn that a 'coal miner' may, in fact, never mine coal. There are many, many support and production jobs, both 'inside' and 'outside' the mine which are necessary to a coal company to support the miners who do mine the coal, and process the coal once mined to create the properly cleaned and sized coal product for customers.

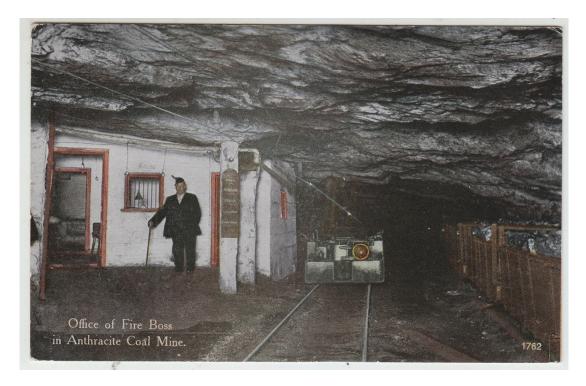
This listing will focus on the many jobs that were found in anthracite mines in Northeastern Pennsylvania when it was a thriving business up to approximately the time of World War II . . .

The following listing was taken from the 'Anthracite Board of Conciliation Digest of Decisions' and is a list of how mining employees were classified by the Board for arbitration hearings. Considered separately were the actual miners and their helpers, who were classified as 'Contract Miner' and "Contract Miner's Helper.'

Ashman, Barney Operator, Bath House Attendant, Beltman, Blacksmith, Boilermaker, Bottom Man, Brakeman, Bratticeman, Breaker Employee, Car Cleaner, Car Spotter, Carpenter, Chain Gang, Chain Thrower, Chargemen, Check Docking Boss, Clerk Weighman, Chemist, Coal Inspector, Concentrator Operator, Cone Tender, Conveyor Tender, Craneman, Driller, Driver (Mule), Driver (Truck), Door Tender, Dumpman, Electrician, Engineer, Fan Attendant, Fireman, Flagman, Footman, Headman, Hitcher, Horseman, Jig Tender, Lampman, Mason, Mason Assistant, Mucker, Nossleman, Oiler, Painter, Patcher, Pipe Fitter, Platform Man, Plateman, Power Plant Man, Pumprunner, Roadman, Rockman, Rope Slicer, Sandman, Scale Repairman, Shaker Tender, Shovel Greaser, Slate Picker, Timberman, Topman, Tracklayer, Tractor Operator, Transportation Man, Tunnel Man, Wash House Attendant, Watchman, Welder. [The] Engineers classification was broken into the following: Electric Locomotive, Fan Hoisting, Locomotive, Plane, Shaft, Shovel, and Slope."

Miners and their laborers were about one-third of all anthracite mine workers. Other mine jobs: underground supervisory officials, colliery superintendent, mine foreman, sectional foreman, fire boss, driver boss, barn boss. In some collieries, there was also a track foreman, maintenance foreman, and a colliery engineer.

## Fire Boss:



A fire boss is a person employed at a mine or state certified official, responsible for examining a mine for dangers, particularly explosive, poisonous or suffocating gases. Usually the fire boss is the first person to enter amine, to verify its safety, before a shift crew enters.

# **Breaker Boys:**

In Miller & Sharpless, we find the following excellent material (pp. 121-125) on breaker boys:

The cycle of a miner's life began early. Every fourth worker was a boy. He usually started out in the breaker, sometimes at age six but normally at eight or nine. The breaker was a towering structure that loomed 100 to 150 feet above the other colliery buildings and machinery. It was the most important building, and its peculiar design made it unlike any others. Its architectural form followed its function, though its shape—like that of a truncated, stepped pyramid or giant praying mantis—gave it a menacing air. Coal brought up from below was carried to the top of the breaker in mine cars along an inclined plane; the coal was tipped from the cars into revolving cylinders which crushed and screened the coal, separating it into various sizes. The coal was then fed downward through a series of chutes. Boys sat crouched on narrow planks over the moving coal, their feet in the chutes to slow the flow. Below them in tiers were other boys, each responsible for picking out the slate and refuse missed by those above. Sometimes old men or injured miners who could no longer work underground labored as "breaker boys," hence the popular regional refrain: "Twice a boy and once a man is the poor miner's life."

In the industry's early days the breaker boy's work day averaged ten hours, a work week six days. The daily wage was forty-five cents. Before water was used in cleaning and processing, the screening room where slate was picked was so thick with dust that the boys could hardly see beyond their reaches. They wore handkerchiefs over their noses and mouths and often chewed tobacco to keep from choking. Later mechanical breakers were somewhat cleaner, but the noise was horrendous and the whole building shook from the movement of the belts and chains that pushed the coal along. The novelist Stephen Crane, on one of his visits to the anthracite region, wrote that the boys "live in a place of infernal dins. The crash and thunder of the machinery is like the roar of an immense cataract. The room shrieks and blares and bellows. All the structure is a-tremble from the heavy sweep and circle of the ponderous mechanism."38 The windows in these breakers often were broken, and in winter icy air swept in, while in summer stifling heat caked coal dust on sweat-soaked bodies. Even after gloves were introduced many companies forbade them, and bleeding fingers—a condition known as "redtop"—were common. Oldtimers claim that the paths the boys took home after work could be followed by the drops of blood in the snow.39 "Over the Coals," a poem by James Sweeny Boyle, catches something of the pathos of their lives:

Over the ice they pull the coals, Their fingers rent by a hundred holes; You may trace the path torn digits tread By the crimson stream on the iced chutes shed. Their heads are bowed and their bodies cramped. A painful look on their features stamped; Their knees are pressed against aching breasts Till bones are bent in their chambers tight. . . .

In sorrow they slave where the massive screen rolls, So fearfully, tearfully over the coals.<sup>40</sup>

In the deep snows of winter, fathers carried smaller boys to the breakers on their backs in the predawn darkness, or mothers would take the younger boys and return to wait for them at the end of the shift. A story from the World War I era in Wilkes-Barre relates how a mother carried her son's lunch pail to the breaker for him because he was too small to handle it himself. After steam-powered mechanical chutes were introduced, many boys who fell into the chutes were killed, their bodies horribly mangled by the rollers. There is a ballad about a mother who went insane when her son was crushed by the rollers. She returned to the breaker day after day, always walking home alone.

At the end of their shifts the boys clambered down the rickety stairs of the breakers, happy to be free, their teeth gleaming in coal-dust-blackened faces. After a wash and supper, they sometimes ran off to night school, where all ages were taught by a single teacher, with light coming from a lamp carried by each boy. In some schools the history and geography lessons were sung in improvised verses that the teacher invented. Most teachers, male and female, seldom lasted long in one school. They usually were not tough enough to deal with the boys.<sup>41</sup>

Work discipline in the breakers was enforced by foremen who used clubs or leather switches to keep the boys at their work and to enforce order. Whippings and similar harsh treatment frequently resulted in spontaneous strikes, slowdowns, and sitdowns. But usually these strikes were short-lived as bosses went after the boys with whips, a practice known as "whipping them in." Still, the boys remained contemptuous and rebellious, shouting and swearing like troopers above the noise as they developed the independence and scorn for the bosses that they would later show in the mines. The brutality of breaker bosses sometimes led to more direct action.

At the "Muskrat" breaker near Moosic in the early part of the century, barbarous methods backfired on a breaker boss with a wooden leg.

The boss, whose name was Bill, had forty or fifty boys under him. As an old-timer who worked for him said, "And when I say that he had those boys under him, I mean just that! For a man with a wooden leg he could skip and hop over those seats and chutes with the speed and accuracy of a squirrel flying from limb to limb. And if he found a single piece of rock, slate or bone in any chute about to enter the coal pocket, he proceeded in a methodical and efficient manner to make every boy on that chute of coal realize the grave necessity of clean coal." 42 Bill's methods were "cruel"



Breaker boys at their work, Eagle Hill Colliery. George Bretz's photographs, taken in the 1880s, include some of the earliest depictions of child labor in the anthracite region. Courtesy of the George Bretz Collection, Albin O. Kuhn Library, University of Maryland, Baltimore County.

and unique. He would raise that wooden stump and give each boy a prod in the back, or use it as a club to inflict punishment on little backs already aching from the constant bending of the body above the chutes of coal. Or, he would come up from behind a boy and take him by both ears and lift him a foot or two above his seat."

One sunny July afternoon after work the boys met at a nearby swimming hole and decided that they would spend the following day swimming rather than report for work. They realized that this was a grave offense; some of the more timid ones pointed out that they would receive far greater punishment at home for "playing hookey" than even Bill could inflict. But the leaders convinced them that their parents need never find out, at least until payday, and by then they might have devised a good excuse. The next day all the boys except three or four—who were promptly denounced as scabs—assembled at the swimming hole. They were soon confronted by the furious Bill, the colliery superintendent, and the outside foreman, who stood on a natural rock overhang above the pool and demanded that the boys return to

work. While the bosses were exhorting the boys, two of them suddenly rushed upon them from a clump of bushes. They slammed into the unsuspecting Bill from behind and went sailing off the ledge with him. As the three bodies hit the pool with a mighty splash the other boys dove into the water and surrounded the puffing, sputtering breaker boss. They dove under him and pulled him down, and when he reached the surface again, gasping for air, they splashed water into his face. It took a full fifteen minutes before the other two bosses could pull the half-drowned Bill from the pool. Negotiations then began. The boys stationed themselves on the other side of the pool from the bosses and demanded that as a condition for their return to work, Bill be relieved from his duties as breaker boss. The superintendent finally gave in and the boys triumphantly returned to their places on the coal chutes.

Breaker boys were used in the mine fields until well into the twentieth century. The Pennsylvania legislature in 1885 made it illegal to employ boys under fourteen inside mines or under twelve in surface jobs. In 1903 these limits were raised to sixteen and fourteen, respectively. But the laws were seldom enforced. Parents eager for additional income filed false affidavits on a boy's age with local magistrates, who



Angelo Ross, breaker boy, Pittston, 1911.
Courtesy of the Lewis Hine Collection, Albin O. Kuhn Library,
University of Maryland, Baltimore County.

collected a twenty-five-cent fee for each document processed. The mining companies did not object because they paid the boys so little.

Young boys made up approximately one-sixth of the anthracite work force at the turn of the century, and a large number of these boys were under legal age. It is extremely difficult to determine the exact number of boys and their ages because 75 percent of them were foreign born. We do know, however, that as of 1905, 75 percent of the state pickers killed were under sixteen.

From their first days in the breakers the boys quickly picked up habits that lasted a lifetime. One of these was the "knockdown," the practice among mine workers of deducting a certain portion of their wages from their pay envelopes without telling their mothers or wives. It was a custom in the region as old as coal mining itself. Though the companies used various systems of payment over time, none was ever so complicated that the wily workers could not somehow circumvent it.

For workers such as breaker boys, door boys, drivers, and laborers, whose wages were based on a set daily or weekly rate, the knockdown was usually confined to a certain part of any overtime pay. But for contract miners, knocking down had a considerably broader scope. Since the miner might make more money on one day than on another, there was no way for his wife to check his wages. He might also charge his wife at the company store for lamp oil that was never purchased or have false charges made to the "book" for blasting powder or blacksmith work. A frequent practice was for the miner to empty his pay envelope, with the amount inside clearly marked on an outside corner, and substitute it for a borrowed company man's envelope, which showed a lesser amount. One St. Clair miner who married an unsuspecting girl from New Jersey devised an ingenious method of knocking down. He told his wife that he earned \$5.96 a day but on payday gave her his pay with \$0.20 deducted for each day worked. He explained that the company charged \$0.10 fare each way for riding up and down the shaft.<sup>43</sup>

"A miner is his own boss." This statement, repeated time and again, was literally true for miners working at the face. There was little doubt that the miners themselves believed it. They showed it by their independence, their attitude toward authority, and their resistance to anyone who attempted to bring them under close supervision and control. They practiced a kind of "miners' freedom" in a work environment different from that of other industrial laborers.

Anthracite mining remained a "cottage" industry during the course of its history. In this case the cottage was the working breast. Work in the anthracite cottage was characterized by contract miners working almost alone, with little outside direction, and relying on skills, judgment, and knowledge acquired through years of practicing their craft. They had control of the pace of work in their immediate surroundings, the techniques used for doing the work, and all decisions affecting it.

Many breaker boys ultimately became door boys, who were also called nippers. In *Miller and Sharpless*, pp. 102-103, we read the following about door boys:

"The vital flow of air in the mines was controlled by wooden partitions built across gangways, in which a door was constructed. The doors were kept closed at all times so that the good, incoming air would be forced into the working places. They were opened only to allow cars to pass. All the doors were built to swing open against the air current and were therefore self-closing. The job of opening the doors at the approach of cars was assigned to door boys, called 'nippers,' usually aged twelve to sixteen years. The work was not very difficult, but they sat alone on a crude bench in the darkness and silence, with only the mine rats for company most of the time. Not infrequently the boys fell asleep at their posts, with disastrous results when mine cars crashed into the closed doors. Yet the job provided the boys with their first real experience working underground, and many of them, fresh from years of grinding labor in the breakers, looked forward to it. . . "

Many people did many different jobs during their years with the D&H and in the mines, as for example, Frank S. Clark, who began working for the D&H as a breaker boy at the Laurel Run Colliery, and who later ran an underground gravity plane in the mines at Laurel Run. In the biographical portrait, with photo, of Frank S. Clark in the September 1, 1936 issue of *The Delaware and Hudson Railroad Bulletin*, pp. 131-32, we read:

"RAN UNDERGROUND PLANE / Retired Parsons Engineer Began 58-year Service on Mine Road / The fact that the Delaware and Hudson's first railroad, which crossed the mountains between the anthracite mines in the Lackawanna Valley and the canal at Honesdale, PA., was for the most part gravity operated, is more or less common knowledge. That an underground gravity railroad system was in use by the company in the mines at the same time is not so generally known [emphasis added]. / FRANK S. CLARK, veteran of 58 years' service with the Company, 'ran' an underground gravity plane in the mines at Laurel Run (Wilkes-Barre) Colliery, back in the seventies. The gravity system was used to replace the loaded cars in mining chambers above the main tunnel with empties to be filled. When three cars had been loaded in the chamber a steel rope was run from the last car of the string, around a sheave equipped with a brake drum and lever, to three empty cars at the bottom of the underground plane. By removing the sprag which blocked the front wheel of the loaded string, the loads were started down the plane, their weight pulling up the three empties. By the hand brake lever the movement of the two 'trains' could be controlled until the empties were 'spotted' and stopped at the top of the plane, the loaded cars being hauled out of the mine by mule-power. . . " (p. 131)

Frank Clark began his work career as a breaker boy/slate picker at the Laurel Run Colliery, at the age of 11. In his biographical portrait, we read:

"MR. CLARK, who was born at Waymart, Pa., a station of the Carbondale-Honesdale Gravity Railroad, June 14, 1862, entered the Delaware and Hudson Canal Company's employ, in the Coal Department at Laurel Run Colliery, at the age of 11, as a 'breaker boy' or 'slate picker.' Less than a year later he was given the task of 'oiling the breaker'--lubricating the big rollers which crushed the 'run of mine' coal, the cogs, cable- and belt-wheels which connected the rest of the machinery with the steam engine which drove it. . . / In the thirteen years he spent in the Coal Department he served, in addition, as ventilating door tender down in the mines; as the driver of the mules which hauled the empty and loaded mine cars in and out of the workings; and finally as a 'runner' on the slope leading from the mines to the surface. On the last mentioned job, it was his duty to ride the empty cars as they were lowered by cable from the outside stationary engine house to the various 'levels' and 'drifts' underground and to attach the cable to loaded cars to be hoisted up the slope to the surface. Communication between the 'runner' and the stationary engineer was maintained by bell-cord signals, a device long since replaced by electronically-operated signals." (pp. 131-32)

#### **Contract Miners and Laborers**

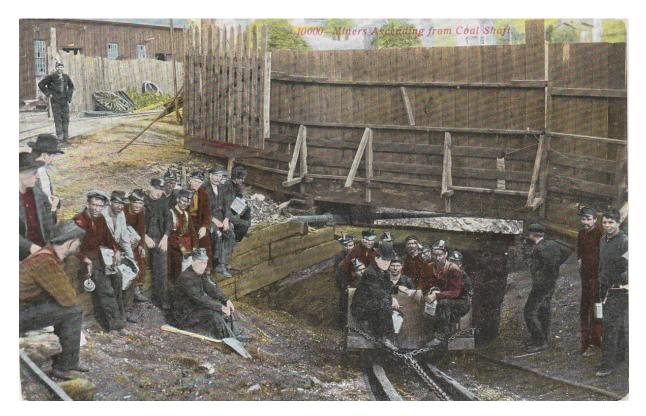
Contract miners were the elite of the underground mine workers. Each contract miner hired a helper, known as a laborer, to work with him. In *Miller and Sharpless*, pp. 97-98, we read:

"The skilled miner was master of his solitary underground domain. He contracted with the operator to work the breast at a certain price per car; he supplied the tools and powder and paid his laborer, his 'butty.' It was the miner's job to direct the opening and advance of the breast, to cut the coal and to prop the roof. And of course he had to supervise the work of his butty, making certain that the car was loaded with as much clean coal as possible. The miner learned his skills on the job. He had to have at least two years' experience as a laborer before taking the required state examination for a skilled miner's certificate. Before a state-appointed board, he had to answer, in English, at least twelve questions on the practical business of mining [emphasis added]. / The miner and his laborer were the key workers underground. . ."

The miners paid for the supplies they used. They also paid their helpers and for the powder, tools, and supplies they used. The operators forced the miners to buy materials from company stores as a condition of employment—at prices fixed by the operators. When deductions were made for helpers' pay, supplies, and rent for the company house, a miner could take home less than one-fourth of what he had earned for the amount of coal actually dug.

Unlike the contract miners, the surface workers were company employees and were paid an hourly wage; bosses were paid once a month.

"Miners Ascending from Coal Shaft" Post card in the collection of the Carbondale Historical Society.



"Miners Ascending from Coal Shaft"

"LUNCH HOUR, A TYPICAL MINING SCENE" Post card in the collection of the Carbondale Historical Society.



LUNCH HOUR, A TYPICAL MINING SCENE

The photograph given below of a group of D&H miners was offered for sale on E-Bay on Photo offered for sale on E-bay, August 22, 2016:



Delaware and Hudson Canal Co. Coal Miners.

#### Carbondale West Side Mine Fire

The nightmare that was the mine fire on the West Side of Carbondale began in August 1946 when trash dumped into an abandoned surface mine pit that was being used as a garbage dump caught fire and ignited exposed veins of coal. Inexorably the flames spread through scores of abandoned but still coal-rich mines that were under Carbondale. One fourth of the City was imperiled by the fire.

The start date of 1946 is confirmed in the article in *Pageant* magazine by Henry Lee on the Carbondale mine fire ("A Town on a Hot Seat," *Pageant*, July 1957, Vol. 13, No. pp. 70-77). Lee's article begins as follows:

"ON AN AUGUST DAY 11 years ago [1957 – 11 = 1946], a very ordinary kind of fire broke out in Carbondale, a little hard-coal mining city of 13,000, located some 15 miles north of Scranton, Pennsylvania. / Spontaneous combustion or perhaps hot ashes had ignited a dumping area in an abandoned 'strip,' or surface mining pit out in open fields a comfortable distance from any houses. . ."

That start year for the mine fire is confirmed in the article by C. P. Gilmore that was published in *POST*, September 7, 1963, pp. 83-87 ("A City on Fire"). Gilmore's article begins as follows:

"For 17 years [1963 - 17 = 1946] the people of Carbondale, Pa., have lived in fear. Raging fires sweep through abandoned coal mines under the town. Deadly gasses seeping into homes have killed townspeople in their sleep. Only the digging of giant pits can save the community."

Both the *Pageant* article and the *POST* article are reprinted in entirety below on pages 000-000.

The fire soon spread through scores of abandoned but still coal-rich mines under Carbondale that were owned by the Hudson Coal Co. There were 360 houses in the area affected by the mine fire. No less than 1,300 persons lived in those houses, some of which tilted and crumbled.

Noxious gases given off in the underground inferno crept upward through cracks and fissures and into cellars and houses. On November 14, 1952, Mr. and Mrs. Collins (Patrick and Elizabeth; he was a retired miner), 78 Scott Street, were found dead in their bed in their house by their nephew, Jimmy Collins, killed, as they slept, by carbon monoxide gas generated in the fires beneath their house. Mayor Frank P. Kelly declared a state of emergency.

As the fire burned, cave-ins became more and more common. Through the 1950s, the fire continued to worsen. The fire soon burned under an area almost a mile long and a half mile wide. An urban redevelopment board was established which condemned the entire 130-acre tract under which the fire was burning. Residents were moved out. Hundreds of houses and businesses, as well as the Columbus and Wilson schools and the Moxie Club across from the Columbus school, were torn down. Also lost were two playgrounds, the Wilson and the West Side.

The underground inferno was owned by the Hudson Coal Company—the Carbondale Coal Company owned the mineral rights, and hence the coal. A Carbondale urban renewal board, the Redevelopment Authority (C. B. Tomaine, Chairman) was created, which condemned the entire 130-acre tract and bought the houses and tore them down. Carbondale Coal then came in and strip mined the area for the coal. In return for being allowed to strip-mine, the company agreed to dig out the fire and refill the land. Carbondale Coal also agreed to pay a small royalty on the coal it removed to help defray the cost of acquiring and clearing the land. Federal officials approved the plan and made \$2.8 million available for land acquisition. The state of Pennsylvania put up another \$1.1 million. The coal company, engineers figured, would spend \$12 million digging the coal out and refilling the pit. For its trouble, it would get \$13 million worth of the coal for a profit of one million dollars. Of this, it would pay out approximately a half million in royalties.

In the *POST* article (p. 86) by Gilmore, we read:

Although the fire had been burning for years, engineers reported that many millions of tons of coal still remained in its path. But the Carbondale Coal Company, which owned the mineral rights—and hence the coal—had taken out all it could by conventional tunnel mining. The only economical way to dig the rest was to strip-mine it—that is, to bring in power shovels, open a tremendous pit, and haul the coal out with trucks. So long as houses were on the land, of course, it couldn't be stripped.

Under the Carbondale plan, a special urban-redevelopment board would condemn the entire 130-acre tract under which the fire was burning, buy the houses, and tear them down. Then Carbondale Coal could come in and strip-mine its coal. In return for being allowed to stripmine, the company would dig out the fire and refill the land. Carbondale Coal also agreed to pay a small royalty on the coal it removed to help defray the cost of acquiring and clearing the land.

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In January 1961 the process of digging out the mine fire began. The work was scheduled to be completed by 1970, but officials said they could finish by 1968. Before they were through they had dug out an area almost a mile long and a half mile wide down to the bedrock—on the average a hundred feet or more.

Digging out the mine fire: about 130 acres, digging to a depth of 100 feet. The first 40 feet under the surface were wash and rock. After that, there were five or six coal veins, ranging in thickness from about three to eight feet and separated by layers of slate and sand rock. They bore names like the New County Vein, Top Clarke, Bottom Clarke, Third Clarke, #1Dunmore.

The grand strategy was to isolate the burning coal with a 300-foot wide trench around the area, then dig out the central region.

The bottoms of the excavations were flooded. The shovels dropped the burning coal into the water to put it out. The coal was then loaded into trucks and hauled away. More earth was moved than was moved by the builders of the Panama Canal.

To dig out the fire, first huge Vs, 60 to 110 feet deep and three times as broad, were dug on the fringes of the West Side as a holding operation: isolate the burning coal with a 300-foot wide trench around the area, then dig out the central region. The fire almost got under the railroad tracks and into the business district, but workmen stopped it 20 feet from that point. In 1960 Mayor Howard took over from Mayor Kelly.

Mayor Howard: "If the fire had got under the railroad track, we would have been in trouble. That was the boundary of the redevelopment authority. If it passed that boundary, we weren't authorized to tear down buildings and go after it. By the time we could have gone through all the necessary red tape to clear the way, there's no telling where the fire would have been." Little by little, the excavators closed in on the fire, backfilling and grading as they went.

During the mine fire, West Siders made it a point, even in the dead of winter, to keep their bedroom windows open to avoid carbon monoxide poisoning. Exhaust fans in cellars were common to draw off the poisonous gasses. Cellar doors were left unlocked so that inspectors could check carbon monoxide levels at any time. The years 1952-1960 were the worst years of the crisis.

Many West Siders set their alarm clocks every two hours during the night, so that they could check for carbon monoxide.

In hundreds of homes, during the mine fire period, the doors were never locked so that state inspectors, working 24 hours a day, could take carbon monoxide concentration readings at any

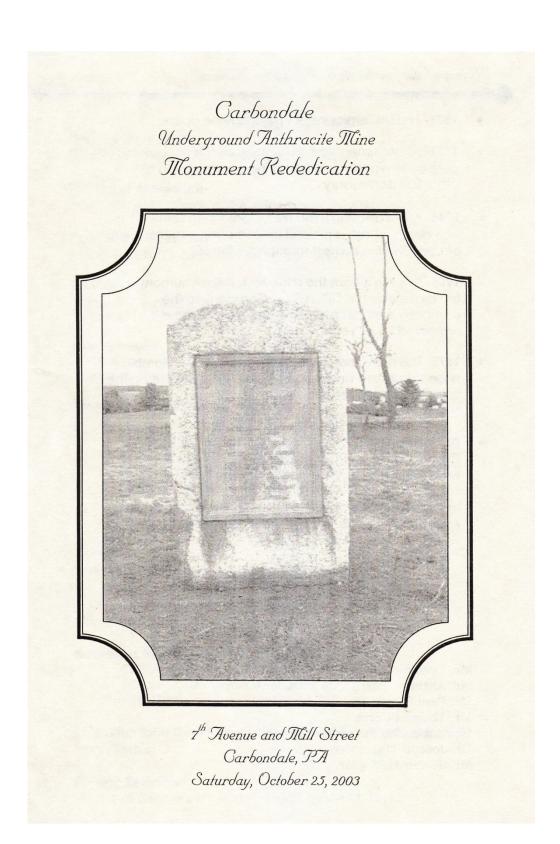
time. Only one hundredth of one percent carbon monoxide (CO) in the air can cause symptoms of CO poisoning to appear in two to three hours. Exposure to one tenth of one percent CO is fatal in an hour and a half.

About the only gauge to the exact location of the fire were comparative temperature readings taken at various boreholes.

When the mine fire was being dug out, the monument on the site of the first underground anthracite mine in America, on Carbondale's west side in the mine fire area, was removed, for safekeeping, from its original location, just west of the D&H Seventh Avenue crossing.

In ceremonies on Saturday, October 25, 2003, conducted by the City of Carbondale, the Carbondale Historical Society, the Chamber of Commerce, and the Anthracite Heritage Discovery Center, the monument, once again at its original location, was unveiled by the president of the United Mine Workers, Edward D. Yankovich, Jr. A broad range of city and state officials attended and participated in these ceremonies. A formal program and reception following the unveiling took place in City Council's Chambers in Carbondale City Hall.

Here is the program for the *Carbondale Underground Anthracite Mine Monument Rededication* ceremonies:



## History of the Carbondale Anthracite Monument

- 1831- First Underground Anthracite Mine opens
- 1901- A monument to commemorate the first anthracite coal mine was dedicated during a celebration of the city's 50th anniversary
- 1946- A devastating mine fire begins when some trash
  was dumped into a pit and ignited some exposed veins
  of coal. The fire burned throughout the 60s.
- 1960- To save it from the mine fires, the monument was first moved by the Gillen Coal Company to the company's offices at 78 Cottage Street, where it remained for 12 years.

1972- The monument was relocated to the Colombia
 Hose Company, and then later to it's current site on the grounds of the Carbondale Fire Department, at South Main Street & 6<sup>th</sup> Avenue

under the care of the Columbia Hose Company/Carbondale Fire Department

1972-2003: monument

 2003- The Carbondale Historical Society, Greater Carbondale Chamber of Commerce, and the Anthracite Heritage Center in conjunction with the City of Carbondale and interested citizens rededicate the monument at it's original site, the intersection of 7<sup>th</sup> Avenue and Mill Street

#### City of Carbondale Elected Officials

<u>Mayor</u> John M. Jordan

#### City Council

393

Mr. Dominick P. Famularo, Council President

Mr. Anthony Perri, Vice President

Mr. Paul Browne

"1960--To save it

from the mine fires.

the monument was

first moved by the Gillen Coal

Company's offices

where it remained

for 12 years."

at 78 Cottage Street,

Mr. Thomas Cerra

Mr. Robert W. Farber

Dr. Joseph Marzzacco

Mr. Justin M. Taylor

### **Program of Events**

#### Welcoming Remarks-

Master of Ceremonies -Councilman, Justin M. Taylor

#### Pledge of Allegiance-

VFW Post 4712- Simpson, PA - Honorary Color Guard

#### Star Spangled Banner-

Performed by Carbondale Area High School Band

#### Invocation-

Nancy and Lamar Esbenshade
-Board Members, Anthracite Heritage Museum

#### Miner's Prayer-

Darlene Ferraro-Ploch -President, Anthracite Heritage Museum

### Unveiling – Dignitaries-

Congressman Don Sherwood
- 10th Congressional District of Pennsylvania

Edward D. Yankovitch, Jr.

- President United Mine Workers of America, District 2

John Gillen

-Owner, Gillen Coal Company

#### America

Performed by Carbondale Area High School Band

#### On Site Closing Remarks-

Master of Ceremonies -Councilman, Justin M. Taylor

#### Addresses from Dignitaries-

Congressman Don Sherwood Edward D. Yankovitch, Jr. John Gillen

# **COALition for a Coal Miner's Commemorative Postage Stamp**-Sarah Reiter

#### Closing Remarks-

Master of Ceremonies –Councilman, Justin M. Taylor

# A MINER'S PRAYER (TRADITIONAL)

O Lord after I have worked my last day and come out of the earth and have placed my feet on Thy footstool let me use the tools of prudence, faith, hope and charity. From now on until I will be called to sign my last pay roll, make all the cables in the machinery strong with Thy love. Supply all the gangways, slopes and chambers with the pure air of Thy grace and let the light of hope be my guidance, and when my last picking and shoveling is done, may my last car be full of Thy grace and give me the Holy Bible for my last shift, so that Thou the General Superintendent of all the collieries can say: "Well done, thou good, faithful, miner come and sign the payroll and receive the check of eternal happiness." Amen.

# A MINER'S PRAYER BY ROSEANNE HALL

Lead me to the light of another day,
Safely to my family o God I pray
Keep me strong so I can provide
For the needs of my family, my joy, my pride
Guide me safely to the skies of blue
And let me not take for granted the work that I do
As I labor and toil through the night of day,
My faith and my hopes show me the way
See me not as a man burdened with strife
But as one who respects the meaning of life
I am the Anthracite miner- come walk with me
Today, Tomorrow and Eternity

Here is the article about the rededication of the mine monument that was published on page 1 of the October 29, 2003 issue of the *Carbondale News*:

# Mining monument

# moved to original location

By Tom Flannery

City and state officials gathered on Saturday morning, Oct. 25, to honor Carbondale's past and look forward to its future.

The occasion was the unveiling of a monument marking the nation's first underground anthracite mine, which was established in 1831 at the railroad crossing near Mill St. and 7th Avenue.

The monument was dedicated in 1901 during the city's 50th anniversary celebration. In the early 1960s, it was moved by the Gillen Coal Co. to 78 Cottage St., then some years later to the Columbia Hose Co. on Main St., to protect it from raging mine fires on the city's west side.

Recently, the Carbondale Historical Society, the Greater Carbondale Area Chamber of Commerce and the Anthracite Heritage Discovery Centerjoined forces for a project to move the monument back to its original

On Saturday morning, a ceremony which began at the Mill St. and 7th Ave. site, then carried over to council chambers in City Hall, commemorated the completion of that project.

Following opening remarks by City Councilman Justin Taylor, who hailed the public-private partnership that made the project a reality, the monument was unveiled by U.S. Congressman Don Sherwood; Edward Yankovich Jr., District 2 president of the United Mine Workers of America; and John Gillen, who owned the Gillen Coal Company.

Taylor traced the rich heritage

"Our city founders set out to build a business, and in so doing they built a nation."

Councilman Justin Taylor

of mining in the Pioneer City, and how that history helped fuel the economic expansion of America.

"Our city founders set out to build a business," he stated, "and in so doing they built a nation."

A great basis for rebirth
During remarks at City Hall,
Congressman Sherwood
celebrated the "indomitable

spirit" of the people of this region.

He said the coal that came out of Carbondale and the Upper Valley "fueled the Industrial Revolution and two world wars."

But it wasn't an easy life, he

"It was dug out with as much blood as coal," Sherwood recounted, stating that men killed in mining accidents would be hauled by a horse and wagon to their homes, where their bodies would be dumped on the front porches and left for their families to bury.

"That's our heritage," he offered. "We're all here standing on the shoulders of people who

came before us."

He stated that these days one only has to look to the mountains and see the windmills to realize how much this region and the nation at large has changed.

"Carbondale and this Upper Valley has been struggling with that economic change for a long time," he stated, "but what perseveres are wonderful families and wonderful people."

Sherwood said the people of Carbondale and the Upper Valley are the key to its economic rebirth.

"There's a great basis of people with wonderful skills, a wonderful work ethic, and a wonderful heritage," he offered, "and we have to help them revitalize this area."

Yankovich reminded those in attendance that it was their forefathers, the people who worked those mines, who helped build this nation.

"Without that fuel source, this

■ See MINES, page 8



MONUMENT UNVEILED — U.S. Congressman Don Sherwood and John Gillen (left side) unveiled the monument marking the nation's first underground anthracite mine, moved to its original site during a rededication ceremony on Oct. 25. Also taking part in the ceremony were

(right side, left to right) Councilman Justin Taylor, County Commissioner Robert Cordaro, Darlene Ferraro-Ploch, Forest City Mayor Frank Brager, and Nancy and Lamar Esbenshade. (NEWS photo by Tom Flannery)



CEREMONY CONTINUES — The monument rededication ceremony continued at City Hall with speakers including John Gillen (left), Jus-

tin Taylor (center) and Chamber of Commerce president Cindy Klenk. (NEWS photo by Tom Flannery)

## -Mine

#### continued from front page

country never would have developed to the extent it did, to become the world's greatest superpower," he explained. "They started it. Their struggles made life better for all of us."

A new day dawning

Lackawanna County Commissioner Robert Cordaro pointed out that "coal mining goes to almost everyone's roots in this Valley," relating that his grandfather was a miner.

"We all have a little coal in our veins," he told the crowd.

Like so many other families who live here, he said his family understands how tough a life it was for them, fearing "cave-ins on the job and the dreaded black lung when they left."

He encouraged everyone to take the county coal mining tour to learn first-hand what conditions were like for them.

"It is so illuminating to see how tough our forefathers were, and that extends to their wives and children," he noted. "They have to be appreciated to understand what you're all about."

Taylor, who is running unopposed for mayor in the Nov. 4 election, told the crowd that

the same spirit which motivated the miners of old carries on in their ancestors today.

"There's a new day coming in Carbondale," the soon-to-be mayor stated, "and we want everyone to be a part of it."

(The Greater Carbondale Area Chamber of Commerce is participating in a petition drive to lobby the U.S. Postal Service for a postage stamp honoring miners. To sign the petition, stop in at the Chamber of Commerce on North Main St. or go to www.coalminerstamp.com on the Internet.)

Given below is the article from *Pageant*, July 1957, Vol. 13, No. 1, pp. 70-77, "Town on a Hot Seat" by Henry Lee. This copy of *Pageant* came to the Carbondale Historical Society from the estate of Frank and Kitty Kelly, Carbondale.

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"Town on a Hot Seat" by Henry Lee

#### Carbondale, Pa. -

## TOWN ON A HOT SEAT

BY HENRY LEE

An insidious and deadly coal fire has doomed one-fourth of this city. Yet residents face the future with hope and determination

ON AN AUGUST DAY 11 years ago, a very ordinary kind of fire broke out in Carbondale, a little hardcoal mining city of 13,000, located some 15 miles north of Scranton,

Pennsylvania.

Spontaneous combustion or perhaps hot ashes had ignited a dumping area in an abandoned "strip," or surface mining pit located out in open fields a comfortable distance from any houses. Briskly, Carbondale's volunteers went to work, but not in time to prevent a few tongues of flame from escaping underground into a network of unmined coal veins.

As it stands today, Carbondale looks like any typical small town in mining country. There is a long Main Street of business buildings, two and three stories high; a triangular park with the town's war memorials, and many side streets of unpretentious frame homes.

But underneath, Carbondale is



honeycombed by miles and miles of old mine workings. As a result, the fire is still burning today. By now, mushrooming through abandoned corridors, it has imperilled the entire West Side—almost a fourth of the city—with deadly carbon monoxide fumes and "caves," or settlings, which crack the walls and tilt the chimneys of houses.

Inaccessible to direct approach, plentifully supplied with coal and oxygen, the fire has resisted all attack, even by the professional fire fighters of the federal government. Now it is creeping south toward the downtown business district.

"If it isn't checked, it will burn on clear to Scranton," Mayor Frank P. Kelly says flatly.

To date, this unique and grim hotfoot has had these results:

A retired miner and his wife, both in their 70's, perished in their sleep when monoxide fumes rose up through the earth-floor cellar into their bedroom.

More than 20 other West Siders, warned in time by headache or nausea, have had narrow brushes with death. A father and son were almost engulfed by flames and steam which erupted like a volcano in their backyard.

In hundreds of homes, the doors are never locked so that state inspectors, working three shifts round the clock, can take carbon monoxide-concentration readings any hour of day or night. At only a hundredth of one percent carbon monoxide (CO) in the air, symptoms of monoxide poisoning appear in two to three hours. Exposure to a tenth of one percent CO is fatal in an hour and a half.

Even in the coldest weather, West Siders must leave their bedroom windows open and operate exhaust fans in the cellars to draw off the monoxide and its sister fume, carbon dioxide. The latter, being heavier than air, rarely rises higher than three feet in the cellar but often puts out the furnace fire. Not surprisingly, colds are commonplace all winter long. "Entire families aren't living—they're existing," says Mayor Kelly.

At times of "surges," when the



fumes concentrate along a particular street or even one side of the street, some residents set their alarm clocks every two hours during the night. Then they wake their children and ask if they have headaches or feel sick to their stomach. If they do, they bundle them up quickly and rush them out of the house into the fresh air.

In some families, small children, bewildered by this topsy-turvy living, frightened by the occasional gas explosions they can hear under the cellar floors, cry whenever they are left alone. One little boy on Scott Street says gravely each morning, "Thank God we're alive."

If a bottle of milk is left on the porch more than a few hours, the neighbors—trying to be casual about it all—find some excuse to telephone or visit the family. Just discreetly checking up.

Often, the state inspectors, or their own fears, compel residents to leave their homes in the middle of the night. If they can't find lodging with relatives, Carbondale has a standing arrangement with the Red Cross to put them up at a hotel.

Some never come back to the old neighborhood, the oldest in Carbondale. They've had it. Through the West Side, you will see more than two dozen abandoned homes; windows broken, paint blistering, porches tilted by the "caves." A few display forlornly hopeful "For Sale" signs, but the real estate business is in the doldrums. Most of the occupied homes now go unpainted, and a recent survey disclosed that a third are in need of major repairs. "They've just lost the zest for living," explains Mayor Kelly. Slowly but surely, a ghost town within a town is growing in Carbondale. As a result of "caves," some of

As a result of "caves," some of the streets rise and fall like roller coasters, and all are bumpy from constant re-patchings. The sewer lines have been replaced at least ten times.

Even Nature looks tired along the West Side. Dead trees, stripped of their bark, and dying shrubs abound in the neighborhood. Because of the heat in the ground, the grass grows even in winter, but year-round it is a dull, faded green.

In the old-fashioned brick City Hall with its high clock tower, I talked to Mayor Kelly and members of the Carbondale Redevelopment Authority. I talked to victims of the fire and saw homes which run downhill from living room to kitchen. I studied lengthy technical reports submitted by federal and state experts, and the representatives of Hudson Coal Co., owners of the underground inferno. I even burned my hand when I held it a good foot above a borehole, only eight inches in diameter, from which fumes and vapor spurt like a tiny geyser.

Carbondale's plight stems from mistakes more than a hundred years old, but as the "Pioneer City," the town still has the stubborn pride and courage of its first settlers. Nowhere is this spirit stronger than among the West Siders. Many of them were born in the neighborhood and they have stayed there with a grim, fighting determination to hang on to what belongs to them—their homes, their way of life, their city.

Their troubles compounded by dwindling population and rising unemployment, every citizen of

72

Carbondale is positive that the fire will be licked and prosperity regained. "Like the phoenix, we're going to come up out of our own ashes," promises the mayor.

Herewith, the Carbondale Story, past and-most important-future:

Only a few years after the first log cabins went up along the Lackawanna River back in 1812, two engineers set out from Philadelphia in search of the "black rock" known to the Indians. They found it—a great stretch of anthracite in the valley between the Moosic Mountains, part of the Blue Ridge chain.

In 1820, the first coal dug in Carbondale was toted by mule and boat to New York and proudly exhibited at the Battery with this sign: "Removed from the ground at a junction called Ragged Island Northeastern Pennsylvania." Washington Irving, the author, was a friend of one-time New York Mayor Philip Hone, a promoter of the venture. "Ragged Island," Irving thought, had a crude ring, and at his suggestion, the town was re-christened Carbondale.

In the following 137 years, an estimated five billion tons of anthracite were dug out of the long valley. If it weren't for the caves and crushings, you probably could walk underground all the way from Carbondale to Scranton. There was prosperity, too. But now the mines are slack and their toll on the countryside—the ugly surface "strip" mining which leaves the land gouged like a battlefield, the underground diggings which produce caves—becomes more evident.

The first diggings were by guess or by compass, and since the early miners kept no maps, today nobody

knows for sure what chambers the fire may be feeding on. Furthermore, the old-timers raked their coal with tines eight inches apart, scorning anything that could pass

between the prongs.

Hence, as the experts visualize it, the fire follows trails of small coal, pea and chestnut size, much as it would follow a trail of gunpowder. When the flames reach a pillar of coal, they climb or descend its surface to another level and burn on. Cavings and crushings prevent man

from underground pursuit.

In all, about 120 acres to a depth of some 100 feet, are directly or potentially affected. The first 40 feet under the surface are wash and rock. Thereafter, according to later, more accurate records, there are five or six coal veins, ranging in thickness from about three to eight feet and separated by layers of slate and sand rock. They bear names like the New County Vein, Top Clarke, Bottom Clarke, Third Clarke, #1 Dunmore.

In this conglomeration of mined and unmined depths, the fire may be feeding at one level under one street block and be either deeper or higher on the next block. The "surges" of CO and CO2 don't necessarily pinpoint its location. Underground currents of air may carry the vapors some distance from the fire before they find weak spots in the earth's crust through which pressure drives them upward. Winters, when the ground is hard, the fumes seem to seek out cellars for their escape route.

About the only gauge to the location of the fire is comparative temperature readings taken at various boreholes—and these sometimes reach 750 degrees Fahrenheit. One thing is certain. In the beginning, only 15 acres were affected, the fumes didn't bother anyone, and the situation seemed normal. Fires in abandoned mines are no rarity in the coal fields; they burn on for years, and if they are away from habitations, there may be no great cause for concern.

But on Friday, Nov. 14, 1952, Carbondale abruptly realized its fire was dangerously out of control.

A round-faced, black-haired youth in his twenties, Jimmy Collins, had got to worrying about his aged uncle and aunt, Patrick and Elizabeth Collins, who hadn't been seen since the previous Wednesday afternoon. "I looked in the living room window," he told me, "and I could see my aunt hadn't done her housekeeping. I figured something must be wrong, so I broke in the back door." He found their bodies upstairs in the bedroom.

"We used to think uncle was lucky," Jimmy says bitterly. "All his years as a miner he never got hurt—and then the mine gets him, anyhow."

"The Collins' tragedy was the clincher," says Tom Gilmartin, general manager and editorial writer of *The Carbondale Daily News*, whose paper put a sevencolumn headline on the story. "After that, we really moved."

Mayor Kelly served as a pallbearer at the double funeral from St. Rose of Lima Church and promptly invoked a state of emergency (which still exists today). In office only two months at the time, serving out an interim term by City Council appointment, he might have tried to stall his way through, taking emergency measures.

But Kelly, a soft-voiced, greying man in his early 40's, is no politician. Grandson of Carbondale's mayor back in 1885, pharmacist by occupation, he feels deeply that he has a civic responsibility. "My father felt, and I feel, that we owe something back to the city that gave us so much," he explains, almost diffidently. "At \$1,800 salary, it isn't the money. That's make \$5 a day and spend \$10. But this is my town, my people."

His unwavering stand that the fire is the issue in Carbondale—he refused to support a fellow Democrat against a Republican Congressman who had helped get federal funds for Carbondale—has won him two elections. Despite his balk which outraged Democratic political bigwigs, he is firmly in the saddle until 1960.

Kelly's first move was to call a public hearing to get federal and state officials—and Hudson Coal—on record. Even that provoked some opposition from people who thought Carbondale ought to hide its predicament from the world. "If you have a skeleton in the closet, drag it out, face up to it," Kelly argued back. "It's a greater crime to try to bring new business in here under false pretenses and then let them find out for themselves what's been going on for years."

The results of the hearing weren't very encouraging. Over the years, the U.S. Bureau of Mines had spent \$200,000 in sporadic flushing operations, drilling boreholes and pouring down more than 80,000 cubic yards of non-combustible silt in an effort to erect barners to the fire.

"It was a business of too little

and too late," one retired miner remembers testily. "They'd flush two or three months till their funds ran out. The fire didn't wait for them to come back. It made end runs around the barriers they had set up and that way probably spread out even wider."

There were experiments with "bleeders," small boreholes set in individual yards, in the hopes that these would attract the fumes. Another proposal was that large ventilating shafts be spotted through the West Side which, with forced drafts, might draw off the vapors. The experts objected that there was greater danger that oxygen from the air would pour down the shafts giving the fire greater impetus.

From all over the world, came suggestions, ingenious but impractical. For \$100,000, an engineer wrote, Carbondale could drain off its nearby lakes into the mine and flood the fire. (The city, at a 600foot altitude, stands higher than many of its neighbors and this step would only flood their mines.) Another expert urged that the pits be stuffed with dry ice (carbon dioxide) which would snuff out the flames. (There was already plenty of dioxide under ground, but no feasible way to train it on the fire.) A European, who refused to divulge his plan in advance, promised to extinguish the fire if the city would pay his transportation to the U.S.

While the city fathers debated, panic spread through the West Side. As a stopgap, the local police were trained in taking CO readings, and then Pennsylvania state mining inspectors took over. Feeling against Hudson Coal ran high, and Joseph Fortuner Jr., writing to *The Daily* 

News from 16 McGarry Ave., "Carbondale (Fire Town) Pennsylvania," thundered:

"Put it this way. I can't go out in my backyard and dig up their coal. They would arrest me, it doesn't belong to me. Well, my home doesn't belong to them, either, and I don't want their gas fumes that have been threatening me and my family for over a year or more.

"All I have to do is check the children's rooms every hour with a gauge left with me by one of the state investigators, keep four bedroom windows open and go down cellar every hour and keep the furnace full of good old Hudson coal—maybe taken from under my house."

Gradually, it became evident that only heroic-sized measures would conquer the red cancer which was eating up Carbondale, little by little. The federal experts said that stripmining of the whole area-some 120 acres populated by 1,300 persons—could dig the fire out of the earth, but who was going to pay for it? The Bureau of Mines didn't have the funds. Hudson Coal couldn't afford to buy all the surface properties. Carbondale didn't have the money. Pennsylvania couldn't pick up the tab. That left only Uncle Sam.

Together, prodded by *The Daily News*' observation that "carbon monoxide molecules have equal affinity for Democratic and Republican red blood corpuscles," Carbondale worked in non-partisan fashion to finance its "big dig." Sermons were preached in favor of the project. Not only the city administration but also the Greater Carbondale Chamber of Commerce and the non-profit Carbondale-Lackawanna

Development Co. got behind it. So did Pennsylvania Congressman Joseph L. Carrigg, whose campaign for re-election Mayor Kelly grate-

fully refused to oppose.

The Federal Housing & Home Financing Agency was intrigued by the city's argument that blight underground should qualify for urban redevelopment grants. Startled but pleased, Regional Administrator David Walker said, "Nowhere else have we had the problem of digging out a fire, extinguishing it and then back-filling and re-using the land." Slashing its own red tape, the government okayed Carbondale's request in four months, a third of the usual time.

Today, all the West Side is marked for extinction. Almost 360 homes, 320 of them still occupied, the Wilson School, a furniture warehouse, five or six small neighborhood groceries and two beer gardens will be torn down. The first home will be razed late this year, and the strip miners with their huge draglines and shovels will gradually move in.

First, they will gouge huge V's 60 to 110 feet deep and three times as broad, on the fringes of the West Side as a holding operation. Little by little they will close in, backfilling and grading the land. The cost, almost \$2,000,000, will be two-thirds borne by the government, and Pennsylvania will chip in, too. The city expects to meet most of its share from resale of the land and royal-ties on the coal recovered by Hudson Coal, which will do the stripping work.

Right now, the Carbondale Redevelopment Authority is acquiring the hundreds of homes involved. The five-man board—an insurance man, two newspapermen, a clothier and an auto dealer—know they are dealing with their own neighbors. In fact, Tom Gilmartin, who is serving as secretary-treasurer of the Authority, lives on the West Side himself. And the 85-year-old widowed mother of Thomas C. Toolan, executive secretary, has lived there all her life. "It's going to be kind of tough to say, 'I'll have to take your home, Mom,'" Toolan admits.

Till a public housing program can accommodate the fire evictees, things admittedly will be tough for them. Many are old, living on small pensions and Social Security checks. Rentals at today's rates will badly strain their slim budgets. Fortunately, the stripping can be done progressively, and evictees gradually relocated in the seven years the digging and refilling will take.

But there's a wrench at leaving the home you've always lived in. For 36 years, John Gilroy and his wife have lived at 91 Scott Street, and though he was one of the first to "holler" for action, he dreads

getting out of the house.

"After all those years there, we got the garden finally fixed, we transplanted the roses to where they'd grow just right," he says. "We even used to have a fish pool, and, I tell you, the place was one of the sights of the West Side when we had it right. It's hard to see it going by degrees. Where will I go? Can I afford a home of my own? I worked too hard to get this one. But if it ain't for us, I suppose it's for the future of the town—the children."

"It's the best thing for us and the town itself," added Jimmy Collins, thinking of his aunt and uncle.

With such stubborn determination and hope for the future, Carbondale has—somehow—survived one setback after another.

Since 1930, the population has been skidding downward from 20,000 to 13,000. In the 1950's, the old roundhouse which had employed 290 men became idle because of dieselization; passenger train service to Scranton was suspended; a manufacturing plant went bankrupt. In a ten-year period, 670 railroad men lost their jobs.

Then, two and a half years ago, an above-ground fire in the heart of the business district caused \$3,200,000 damage. Unemployment has been running about 13 percent, and most pay checks come from the needle industry which hires women.

But with its salty sense of humor and a damned-if-we'll-die philosophy, Carbondale carries on. Tom Gilmartin, who sometimes refers to the old neighborhood as Monoxide Gardens, once wrote tongue-in-cheek in *The Daily News*:

"Our West Side homes at present have value as places in which to live—with a certain dash of sporting risk from monoxide thrown in."

Even the mayor, wryly surveying the open gashes left by old strip mines, and the protruding "bleeders" which spout vapor, says:

"We could almost go back to our original name — Ragged Island.

Maybe I ought to conduct guided tours on the hour from City Hall like in Yellowstone National Park."

But along with these minuses, there are plusses which Carbondale has achieved over the past few years. "I don't want you to think we're going to pot altogether," Mayor Kelly says, and drives you through town to point out the new nursing school at the hospital, the new Catholic Youth Center which cost \$2,000,000.

Despite fire and unemployment, some \$250,000 has been paid off on the city's bonded indebtedness, and today Carbondale could go out and borrow \$686,000, compared to \$23,000 just a few years ago.

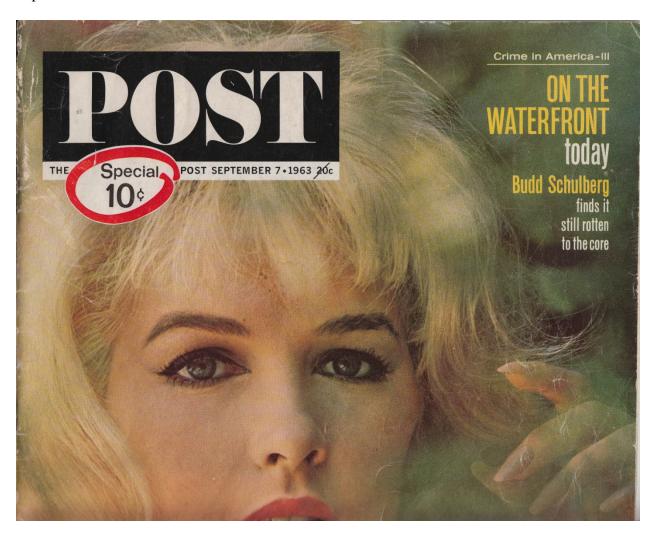
For the future, even more is in store. Where the West Side now stands, the redevelopment program calls for a great industrial park (which will bring in the industry so sorely needed) and perhaps a recreation area and small housing development. Fulfillment of the entire project will take a decade, but Carbondale knows it will come to pass.

"We'll just have to pick up the pieces and straighten this thing out," the Mayor says confidently.

And that isn't just Kelly talking. It's the jaunty spirit of a tough little town. A sign hanging outside one of the West Side beer gardens which is doomed for extinction says it in a single phrase: "If you can't drop in, smile as you go by."

Given below is the article from *Post*, September 7, 1963, pp. 83-87, "A City on Fire" by C. P. Gilmore, with photographs by Robert Huntzinger. This copy of *Post* was donated, anonymously, to the Carbondale Tax Office on June 27, 2014. That same day, the Tax Office presented this copy of *Post* to the Carbondale Historical Society.

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| Hazel                 |      |     |    |   | • |   |   |   | , |    | • |     |    |     |     |     |      |      |      |         | ٠. | 80 |
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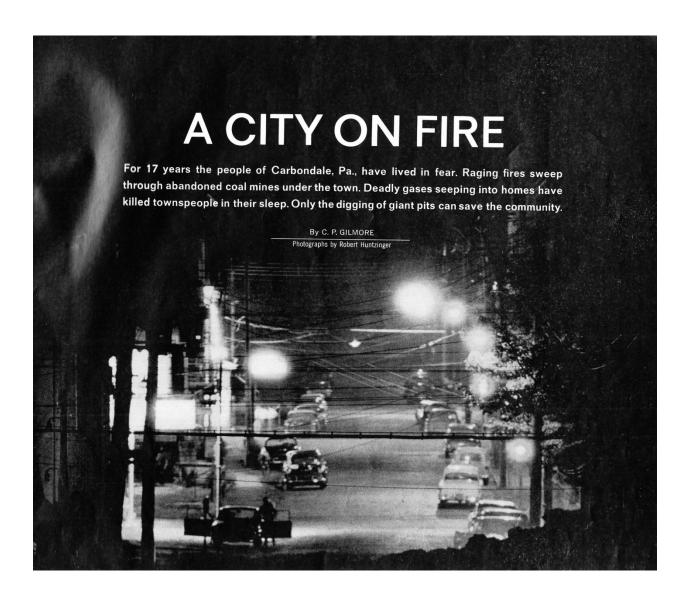
The authors. Post Washington editor Stewart Alsop joined forces with professional pollster Oliver Quayle and interviewed 500 Americans from coast to coast for their startling report on white reaction to the Negro revolt. . . . Free-lance writer Richard Warren Lewis, who tells how pretty girls become stars, found the starlets ready for anything. During an interview, one beauty ran out of purplepapered cigarettes and calmly switched to the author's cigars. . . . English-born writer Margaret Bonham has had 94 short stories published. . . . Alan L. Otten, coauthor of the story on President Kennedy's "unknown" brother-in-law, covers the White House for The Wall Street Journal, and Charles B. Seib is

assistant managing editor of the Washington Star.... Food expert Esther Riva Solomon attended the Cordon Bleu in Paris.... Richard Llewellyn, who describes a priest's fight against poverty, is the author of the famous best-seller, How Green Was My Valley.... Free-lance writer Edward Linn, who collaborated on Bill Veeck's story of trying to buy the Washington Senators, also collaborated with the former Cleveland and Chicago owner on the autobiography, Veeck as in Wreck.... C. P. Gilmore, who reports on a city's fiery ordeal, covered disasters for TV.

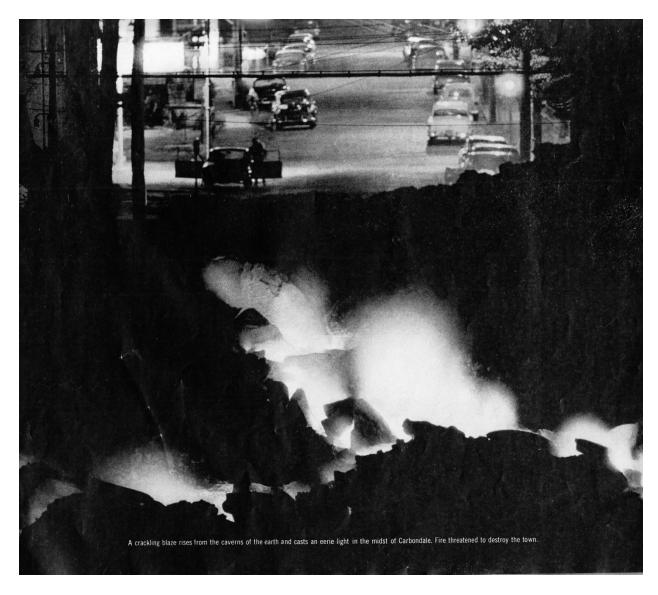
The cover portrait of Stella Stevens is by Allan Grant, a well-known movie-star photographer.

"C.P. Gilmore, who reports on a city's fiery ordeal, covered disasters for TV."

#### Top half of page 83:



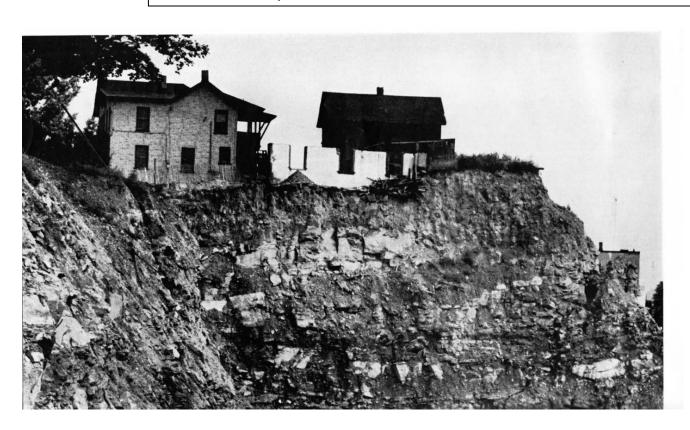
#### Bottom half of page 83:



Caption given above: "A crackling blaze rises from the caverns of the earth and casts an eerie light in the midst of Carbondale. Fire threatened to destroy the town."

#### Top half of p. 84:

"The earth opened, disgorging flame. "Mother of God," he exclaimed, "we could have been cooked alive."



### Bottom half of p. 84:



"My boy Bob—he was just five years old then—had come into the backyard with a pitcher of lemonade my wife had made. As I took it, Bob screamed, 'Daddy, the ground is falling.' I looked down and I didn't know what to think. The ground was opening up under him. I grabbed him by the shoulder and threw him behind me. Everything went down, and it kept going down and down. I flung myself back away from the hole and clawed up the bank.

"When it went down, this debris and thick yellow smoke and flame came up out of the hole. Some men up on Willow Avenue about a half mile away saw it and thought the house was on fire."

Santo Perri, a short, dark, powerfully built ex-railroader, father of eight, paused and drew a breath. "Mother of God, we could have been cooked alive."

Perri's dramatic backyard brush with death hasn't been the only one in his community of Carbondale, Pa. Until recently he and 1,200 of his neighbors in a west-side residential section lived in constant peril, victims of one of the strangest catastrophes ever to befall a town.

Their nightmare began in 1946, when trash dumped into a pit caught fire and touched off exposed veins of coal. Inexorably, the flames spread through scores of abandoned but still coal-rich mines that honeycomb the earth under Carbondale. As the blaze chewed at the town's foundations, the burning earth shivered and fell, houses tilted and crumbled. Noxious gases created in the underground inferno crept upward through cracks and fissures into cellars and bedrooms.

The hellish existence of Carbondale's west-siders was made even more bizarre by the incongruity of the setting. By any standards, Carbondale provides an unlikely backdrop for tragedy. The sleepy little town of 13,000, nestled in a narrow valley in the green mountains of northeastern Pennsylvania, seems completely tranquil. Tree-shaded streets are lined with comfortable-looking, old-fashioned, two-story frame houses. The pace of life on Main Street-a little gone to seed-is casual. With the slump in the coal industry and the decline of mining since World War II, Carbondale hardly even looks like a mining town anymore. Only the long gashes in the mountainsides above the town-scars left by strip miners who peeled back the rocky earth with steam shovels to get at the anthracite beneathgive it away.

In this setting, the people of Carbondale had trouble believing the fire was serious. For the first few years they tended to regard the conflagration below their feet more as a nuisance than a menace. But their complacency was suddenly shattered one day in 1952. A west-sider named Jim Collins recalls the incident: "One day we noticed through the window that the table at my uncle's house next door was set, but we didn't see him or my aunt. The next day the table was still set exactly the same way. We got worried. The door was locked, so we broke in."

They found the elderly householders, Mr. and Mrs. Patrick Collins, dead. The killer was carbon-monoxide gas, gener-

Families had to abandon their homes now perched on the edge of excavation.

ated in the fires beneath the house. It had crept in and claimed its victims while they were still asleep.

Mayor Frank P. Kelly declared a state of emergency. Pennsylvania Department of Mines men swarmed over the area with gas detectors and found that many cellars throughout the area were filled with lethal concentrations. Inspectors went on 24-hour duty, checking houses every few hours. All cellar doors were left unlocked for their visits.

Inspector Martin Campbell found gas in one cellar and went upstairs to warn the lone resident. "I found her in the kitchen, knocked out," he says. "I got her outside and called the police and told them to send a doctor. Fifteen minutes more, the doctor said, and she would have been dead."

Families in the danger area set their alarm clocks, got up once an hour through the night, and roused sleepers to make sure that all were safe. Through the winter—and for many winters to come—residents in what one newspaper called Monoxide Gardens had to sleep with their windows open, even in subzero weather.

#### Families forced to leave

When inspectors found rising concentrations of gas, they sent householders to local hotels for the night. The Red Cross arranged to pay the bills automatically so there would be no delay in getting threatened residents to evacuate. Days—occasionally weeks—went by before gas concentrations fell low enough for families to return to their homes.

"We used to get surges of the gas," said former Mayor Kelly. The tall, softspoken, grandfatherly-looking man who was Carbondale's chief administrator from 1952 through 1960—the town's worst years of crisis-leaned over the counter in his drugstore and recalled the scene. "The air currents in the mine would change. One of our worst experiences came early one Sunday morning. People were getting up to go to early Mass. A number of them woke up dizzy and vomiting. They roused members of their families and then called the neighbors. We had about 20 or 25 that were just able to get out of their houses and into the air in time to recover."

Gas was only one menace generated by the flames. Heat was another. Large areas of the ground on Carbondale's west side began to get warm, then hot, as the fire spread through the mines a few feet below the earth's surface. Even while snow lay over the surrounding countryside, grass in the mine-fire area stayed green. This was pleasant enough, but other effects of the heat were not. "I remember one house," says Inspector Campbell, "where the concrete in the cellar was so hot it would burn your feet. The fire was right under there. The vapor would be rising off the walls. When you went in there, you'd just want to get out-right away."

As the fire burned on, cave-ins—always a danger in mining country—became more common. Leo Coleman, a railroader who lived in the mine-fire area, ordered two tons of coal and had it delivered into his cellar. "Just after I got the

coal in there, a big cave-in came right under the coal, and the whole pile went down in the mines. It took everything."

When the ground quivered and sank, houses were strained, twisted and broken. "We couldn't take anyone into the parlor," says Coleman. "The wallpaper was torn, everything was busted, and there was plaster falling all over everything. They jacked up the house four times, but it would sink again." Cellars became forests of jacks as householders struggled to keep their homes upright.

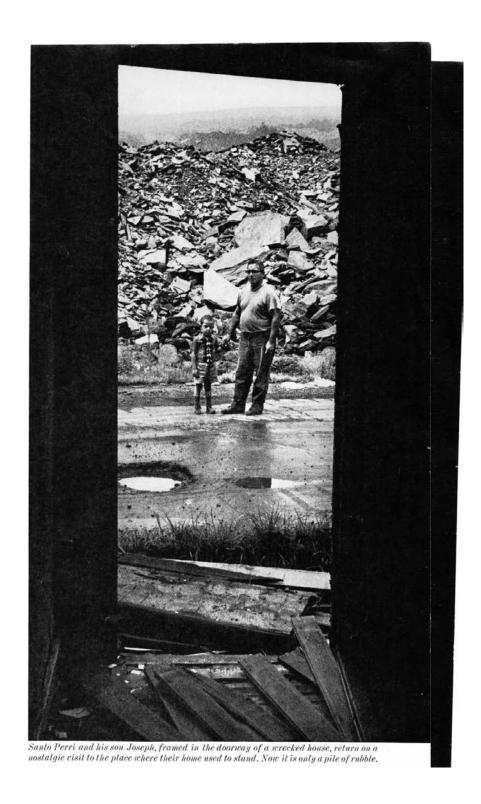
They weren't always successful. Despite the efforts of west-sider Stanley Cominsky, the house he occupied with his wife and three children continued to tilt until it was hard to walk across the floors without slipping. Cominsky propped the teetering structure with boards, but still it threatened to tip over. "The walls were busted, the sewer and water pipes leaking, and everything was falling

apart," says Cominsky. He finally gave up and moved away.

Paul Elbrecht and his mother put blocks of wood under their bedposts to try to make the beds level enough to sleep in. Other blocks propped up their diningroom table so that dishes wouldn't slide off. The Elbrechts eventually capitulated and left too.

Most families, though, defied the gas, the underground heat, the cave-ins and sinkings, the cracking homes. They stayed. Visitors were amazed. "People would always ask, 'Why don't they get out?" says Mayor Kelly. "Well, where were they going to go? This is everything they owned. They didn't have any other place. They couldn't sell their property and buy another home. Who would buy a house over a mine fire?"

"We were afraid," says 75-year-old William Cooper, a 50-year resident of the west side, "afraid of going to bed at



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## In a cliff-hanging finish, workmen stopped underground blaze only 20 feet from disaster.

night. The children would say, 'Do we have to get out tonight?' But what could you do? They have a lot of bad things some places, but still people stay. Cyclones blow down their homes and they build them again. I don't know why; people just seem to stay."

At first, city fathers and mining officials were hopeful that they could control the fire. Since mine fires are not uncommon-more than 200 currently burn in coal seams across the country—techniques have been worked out for fighting them. These methods are frequently successful. Sometimes covering the ground above the fire with earth or clay will seal cracks and choke off the air supply. Trenches may isolate burning coal and keep fire from spreading. Carbondale's fire, though, presented special problems. First, it was bigger than most. And its location under a residential area—complicated the situation. The most promising technique for Carbondale, experts decided, was "flushing"-filling tunnels and blocking off the fire.

Workmen drilled hundreds of holes. Truckloads of silt were washed down into the mines throughout the fire area. But it was a losing battle. "They'd start to flush; then when the money would run out, they'd have to stop," says Mayor Kelly. "Then the fire would make an end run and take in a bigger area. We'd have to wait for a new fiscal year to get a new program. But the fire didn't operate on a fiscal year, and it kept getting bigger."

Through the 1950's the fire continued to worsen. Engineers began to suspect that flushing, in Carbondale's labyrinthian mines, could never work. The rich veins of anthracite that lie under the city had been mined since the 1820's. Thousands of tunnels, many unrecorded and forgotten, formed an unending maze. Carbondale's abandoned mines were full of highly combustible coal debris. Air to feed the fire came from thousands of unknown sources. Mine experts not only couldn't block off tunnels—they frequently couldn't even tell for sure where the fires were burning.

Finally, three years ago, with the blaze threatening to spread under the city's business district and east-side residential areas, officials came up with a massive plan to beat the fire.

In the early 1950's, Mayor Kelly had gone to nearby Scranton to hear federal officials describe the newly enacted urban-renewal plan, which provided federal funds to help cities wipe out blighted areas. It suddenly occurred to Kelly that although the law had been intended to help fight blight above the ground, perhaps it could be stretched to include underground blight as well.

"The idea required a lot of selling to the people in Washington," says Kelly. "But they finally decided that the act just said blight, and didn't specify that it had to be aboveground." With this encouragement, Kelly appointed a planning commission of leading citizens to work out a plan which would both meet urbanrenewal specifications and put out the fire.

Although the fire had been burning for years, engineers reported that many millions of tons of coal still remained in its path. But the Carbondale Coal Company, which owned the mineral rights—and hence the coal—had taken out all it could by conventional tunnel mining. The only economical way to dig the rest was to strip-mine it—that is, to bring in power shovels, open a tremendous pit, and haul the coal out with trucks. So long as houses were on the land, of course, it couldn't be stripped.

Under the Carbondale plan, a special urban-redevelopment board would condemn the entire 130-acre tract under which the fire was burning, buy the houses, and tear them down. Then Carbondale Coal could come in and strip-mine its coal. In return for being allowed to stripmine, the company would dig out the fire and refill the land. Carbondale Coal also agreed to pay a small royalty on the coal it removed to help defray the cost of acquiring and clearing the land.

Federal officials approved the plan and made \$2.8 million available for land acquisition. The state of Pennsylvania put up another \$1.1 million. The coal company, engineers figured, would spend \$12 million digging the coal out and refilling the pit. For its trouble, it would get \$13 million worth of coal for a profit of one million dollars. Of this, it would pay out approximately a half million in royalties.

The plan, despite its promise, didn't

meet with universal approval. Some house-holders in the affected area still felt that there must be some way to put out the fire without destroying their homes. "There wasn't," says C. B. Tomaine, board chairman of the Redevelopment Authority. "That fire is a cancer. You've got to go in and dig it out. If you get it all, it's done. If you don't, there's no telling where it will break out."

By the end of 1960 Tomaine's Redevelopment Authority, established to run the massive project, had condemned and bought the first sections of land and begun moving residents out. A housing authority, set up to help those who qualified for public housing, opened the doors of a community of newly built duplexes to receive the displaced families. In January, 1961, the shovels began to bite into the earth and work down toward the fire. A few weeks ago I went to Carbondale to check on their progress.

The work scene is awesome. Men with giant shovels, bulldozers and trucks are now swarming over the site. Before they are through, they will dig out an area almost a mile long and a half mile wide down to bedrock—on the average, a hundred feet or more. In the process they will move more earth than the builders of the Panama Canal—and, hopefully, stop the fire which is threatening the city's existence.

Already, pits big enough to swallow a battleship have been gouged out of the earth. Clouds of smoke billow upward from cracks and crevices. Flames leap in underground chambers revealed by the digging. Glowing coals cast an obscene crimson light over the area at night. The draglines cut and bite, tearing the hot coal from the earth. The smell of burning sulfur fills the air.

The bottom of the pit, where men and machines work, is flooded. The shovels drop the burning coal in the water to quench it, then load it in the trucks to be hauled away. It is a nasty job. "It's hard on equipment, real hard," says foreman Gino Marchetti. "Working in water, you can't keep shovels greased right. But you need that water."

Frank Olshefsii, a gravel-voiced bull of a man who has been strip-mining for 30 years, says, "I never believed the stuff would burn like that underground. Walking past the burning chambers is like walking past an open furnace. The heat hits you in the face."

In spite of the working conditions, officials optimistically predict that the job will be finished by 1968—two years ahead of schedule. About 25 percent of the project has been completed. Still, it is only within the last few months that victory over the fire has seemed assured.

The grand strategy was to isolate the burning coal with a 300-foot-wide trench around the area, then dig out the central region. It almost didn't work. As crews made the last cut on the area's eastern perimeter, the fire raced ahead and nearly broke through a crosstown seam into deposits under the business district and east-side residential section. Workmen stopped it 20 feet from disaster.

"That sewed it up," says Mayor Frank Howard, who took over from Mayor Kelly in 1960. "Until then, we weren't sure we had it cut off." The mayor, who runs a service station when he's not directing the city's affairs, finished filling the tank of a car and hung up the hose. He wiped his forehead with one sleeve of his sweatshirt. "We were really holding our breaths until then. If the fire had got under the railroad track, we would have really been in trouble. That was the boundary of the redevelopment area. If it passed the boundary, we weren't authorized to tear down buildings and go after it. By the time we could have gone through all the necessary red tape to clear the way, there's no telling where the fire would have been."

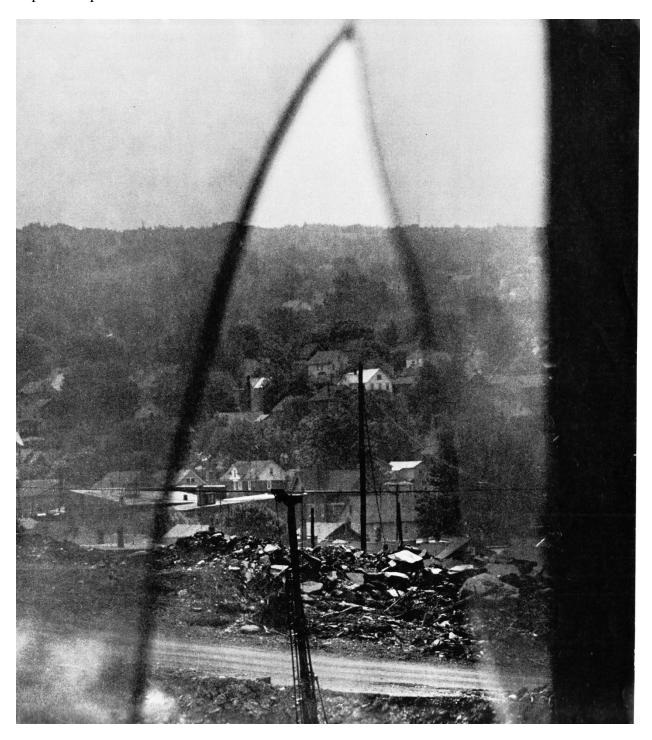
#### Eyeholes in a skull

While most west-side houses have been demolished and giant holes now gape where they stood, some reminders of the past remain. Cellar doors of the few remaining homes are still unlocked for the inspector's visits. The house where the Collinses died still stands, decayed and desolate, windows like eyeholes in a skull. Cellars—minus their houses—dot the hill-sides. Here and there a well-maintained home, still inhabited, stands out in strange contrast to the panorama of desolation. Neatly trimmed lawns and blooming flower beds seem out of place in the scarred landscape.

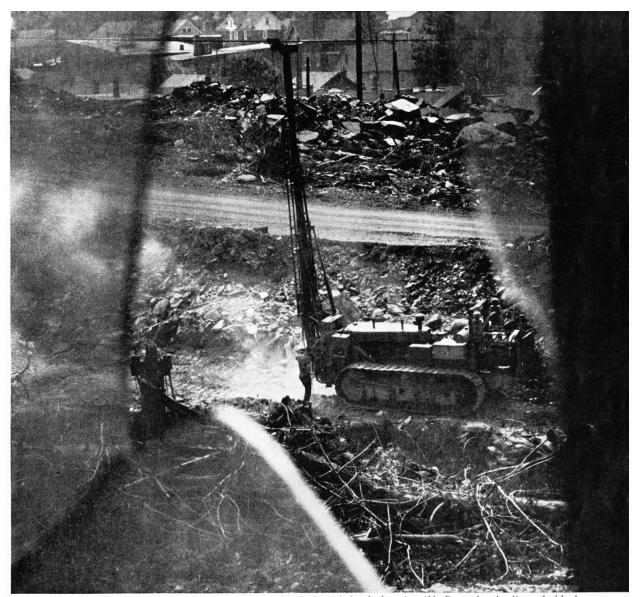
With the digging job well under way, a few west-side residents still aren't convinced that the cure isn't worse than the fire. Strangely enough, many still are reluctant to go.

"It's really heartbreaking to pick up and leave after thirty years," says Mrs. Jennie Fortuner. "I raised my children in this home, and now three of them are married and the other one is supposed to be married sometime next year. I wish I could stay here until then."

Top half of p. 87



#### Bottom half of p. 87:



Once this house was located in a peaceful residential area. The broken window looks out on this Pennsylvania city pocked by huge man-made holes. The excavators, in their attempt to dig up the blaze, will move more earth than the builders of the Panama Canal.

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William Cooper was digging in a flower bed when I walked into his yard. He didn't know if he would be there when the flowers he was planting came up, but he went on planting.

Joseph Cerra is a small, tough, wiry man, deeply tanned and spry as a game-cock. He doesn't look his 70 years. "My wife's father gave me this lot when I came home from the service in 1919," he says. "My mother gave me a present of \$500, and I built this house. The place is paid for and everything. I thought I was set. I can't go back to work now. But I can't get another house for what I'm getting for this one."

Living in danger for so long has made area residents curiously immune to fear. Jim Collins, who discovered the bodies of his aunt and uncle, is one of the last hangers-on. He still lives in the house next door. The constant threat doesn't bother him. "It's all right as long as you keep the windows open," he says.

As the last few remnants of the westside community face the inevitable day of evacuation, city officials are busy blueprinting the future. A reborn west side, under their plans, will become a thriving industrial park, bringing new jobs, new vitality to the town.

For the first time since the decline of the coal industry in the 1930's, there is real hope in Carbondale. With victory in the underground battle in sight, the town is stirring with new vigor. Business and civic groups are working to bring new industries to town and have several new plants to show for their efforts. Planning Commission chairman Joseph Farrell, whose clipped way of speaking gives his words a driving intensity, puts it this way. "This used to be a good town. But with mining over, it was going downhill. Then strip mining came in and made a mess of it. Then this damn fire. Now that the battle has been won, we're ready to move. Now we've got citizen participation. The fire was the spark plug."

Mayor Howard adds ardently, "The industrial site that we're going to build on the reconstituted fire area will be the salvation of this town. Carbondale is the

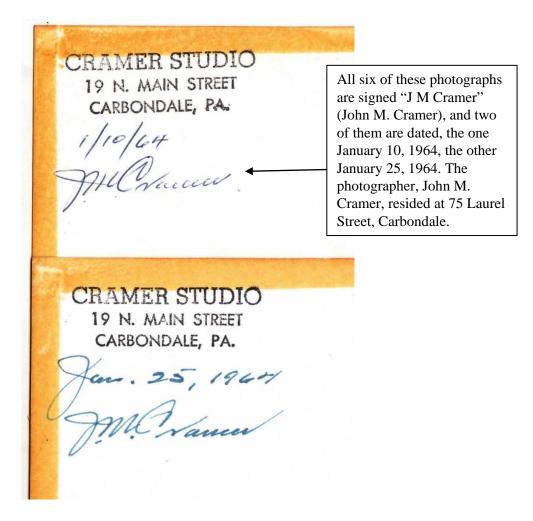
city of the future."

But while the scars in Carbondale's smoking earth will soon be smoothed over, those in the minds of its residents may take a long time to heal. Mrs. Santo Perri could be speaking for all whose lives have been irreparably changed by the underground menace. Her memories are still vivid: "We had to leave. The hole in the backyard kept getting bigger and moving toward the house. The children would wake up sick and vomiting from the gas. We had a beautiful big cat we raised from a kitten. One day we found her dead in the cellar. We lived in that house nineteen years and we didn't want to leave. But no home was worth what we had to go through."

Mrs. Perri slowly looked at the neat living room of the Housing Authority duplex on Carbondale's east side where she and her family now live. "Every once in a while we go over and look around where our house used to be—to torture ourselves, I guess. But we haven't been there for a while now. I don't want to go anymore." She paused again and sighed. "But it was beautiful over there. I'll never forget it."

#### **Cramer Photographs of Carbondale West Side Mine Fire**

Included in a large collection of papers, photographs, and documents that relate to the Carbondale Mine Fire that came to the Carbondale Historical Society from the estate of Frank and Kitty Kelly, Carbondale, are six color photographs of the mine fire by Cramer Studio, Carbondale. All of these photographs are signed "J M Cramer". All of these photographs are Kodachrome Enlargements that were made and dated by Kodak. (The date when these enlargements were made by Kodak is stamped on the reverse of each photograph. Given those Kodak date stamps, we have been able to arrange these six photographs in chronological order. The enlargements were made in the period October 1962—March 1964.) All of these photographs are stamped on the reverse with a Cramer hand-stamp and are signed in blue ink, "J. M. Cramer." One of those photos is dated January 10, 1964; another is dated January 25, 1964. The exact dates (month and day) on which the other four photographs were taken is not yet known, although the years in which those four photographs were taken can be inferred, with a high level of certainty, from the year dates in which Kodak made these enlargements.



Given below are those six Cramer photographs. They are shown here as electronic scans of the enlargements (7 3/8" x 7 3/8") made by Kodak. They are arranged here in the chronological order in which these enlargements were made by Kodak.

1. Carbondale West Side Mine Fire. Cramer stamp, signed by J. M. Cramer; enlargement dated October 1962



2. Carbondale West Side Mine Fire. Cramer stamp, signed by J. M. Cramer; enlargement dated October 1962



3. Carbondale West Side Mine Fire. Cramer stamp, signed by J. M. Cramer; enlargement dated April 1963



4. Carbondale West Side Mine Fire. Cramer stamp, signed by J. M. Cramer; enlargement dated September 1963



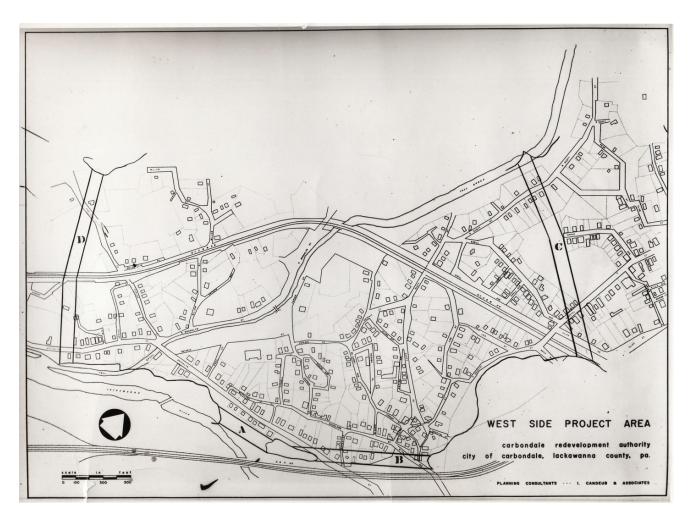
5. Carbondale West Side Mine Fire. Cramer stamp, signed by J. M. Cramer; date of photograph, January 10, 1964; enlargement dated January 1964. Note that the date on which the photograph was taken and the date when Kodak made the enlargement align chronologically.



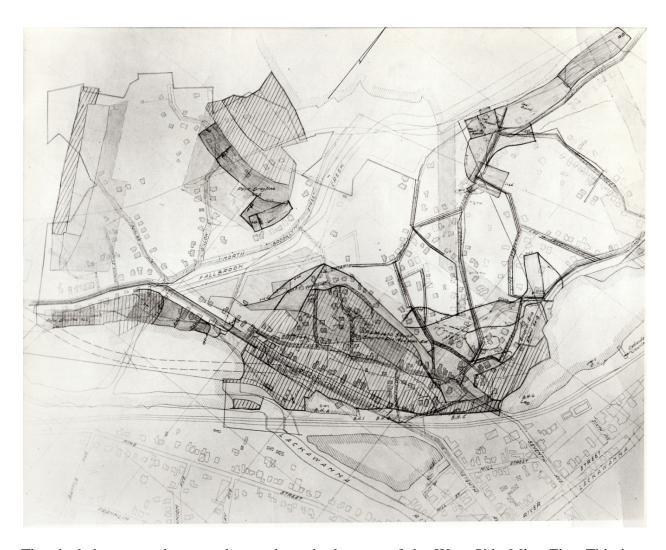
6. Carbondale West Side Mine Fire. Cramer stamp, signed by J. M. Cramer; date of photograph, January 25, 1964; enlargement dated March 1964. Note that the date on which the photograph was taken and the date when Kodak made the enlargement align chronologically.



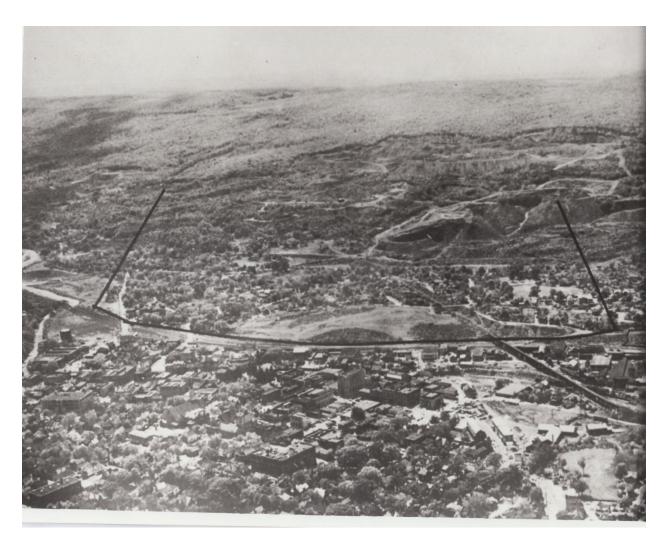
**Digging Out the Mine Fire on Carbondale's West Side.** Photos in the collection of the Carbondale Historical Society.



The West Side Mine Fire Project Area encompassed the area shown on the map given above that is outlined by the letters A, B, C, and D.

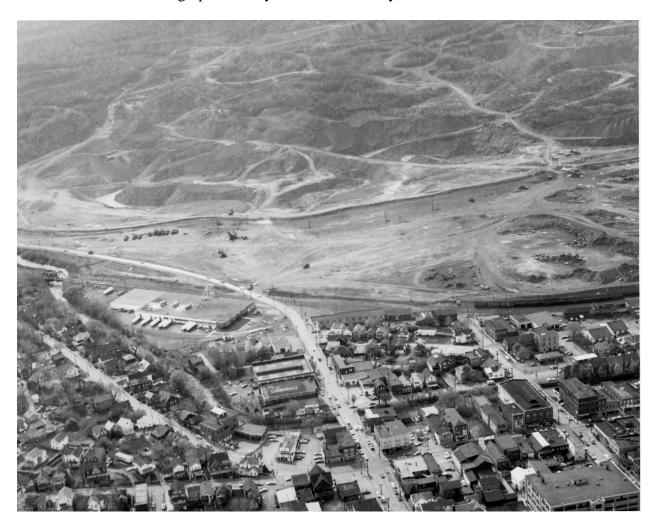


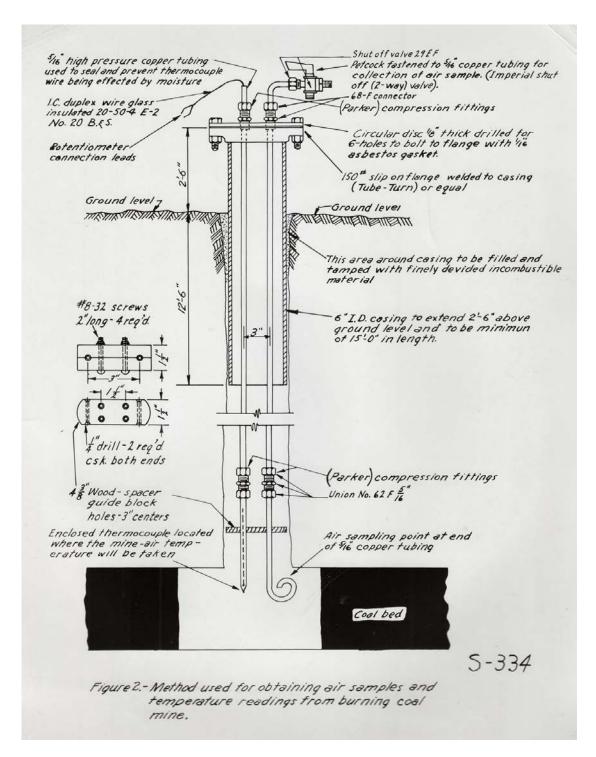
The shaded area on the map shown above is the area of the West Side Mine Fire. This is a photograph by "CRAMER STUDIO / 19 N. Main Street, Carbondale, PA. Photo in the Frank and Kitty Kelly collection of the Carbondale Historical Society.



Carbondale, Aerial View Looking East, Downtown Carbondale in the Foreground. The area outlined in black, on Carbondale's West Side, is the area where the mine fire was located. Photograph in the collection of the Carbondale Historical Society.

The mine fire area. Photograph courtesy of Nellie Connolly, Carbondale:





This photograph is from the Bureau of Mines, Department of the Interior. Photo in the collection of the Carbondale Historical Society. This is a photograph of a bore hole.



Digging Out the West Side Mine Fire. Photograph in the Frank and Kitty Kelly Collection of the Carbondale Historical Society.



Digging Out the West Side Mine Fire. Photograph in the Frank and Kitty Kelly Collection of the Carbondale Historical Society.



Digging Out the West Side Mine Fire. Photograph in the Frank and Kitty Kelly Collection of the Carbondale Historical Society.



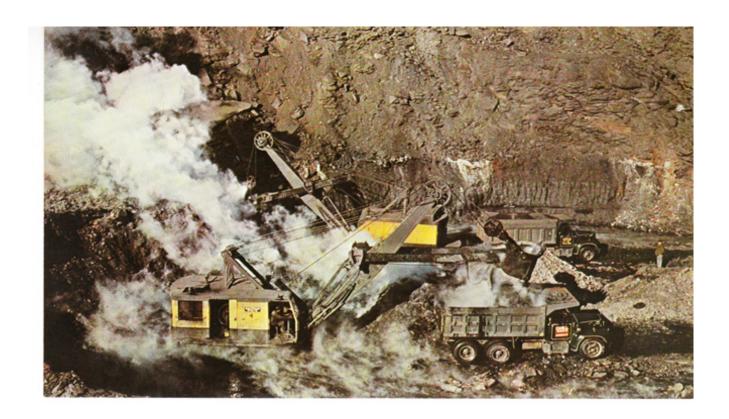
Digging Out the West Side Mine Fire. Photograph in the Frank and Kitty Kelly Collection of the Carbondale Historical Society.



Digging Out the West Side Mine Fire. Photograph in the Frank and Kitty Kelly Collection of the Carbondale Historical Society.



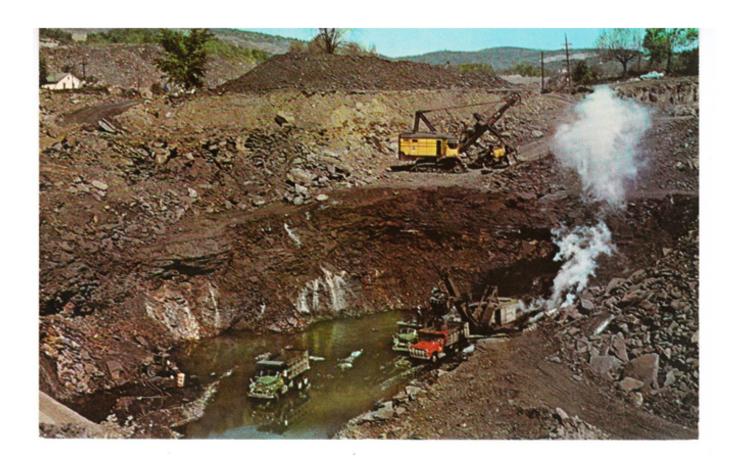
Digging Out the West Side Mine Fire. Photograph in the Frank and Kitty Kelly Collection of the Carbondale Historical Society.



J-131

Removal of the burning "Clark Vein" in the Brooklyn Street area in the Southwestern part of Carbondale, Pa. 451 structures, including many beautiful homes, were first removed in order to provide access to the burning vein of Anthracite coal. The project is under the Redevelopment Authority and is financed by the city, state, and Federal Governments.

Post card in the collection of the Carbondale Historical Society.



Digging Out the West Side Mine Fire. Post card in the collection of the Carbondale Historical Society.



Digging Out the West Side Mine Fire. Photograph in the Frank and Kitty Kelly Collection of the Carbondale Historical Society. Photograph taken by John M. Cramer on June 7, 1955, and signed on the reverse "J M Cramer"; photograph stamped on back: "Cramer Studio / Portrait & Commercial Photographers / 19 No. Main Street / Carbondale, Penna. /Jun 7 1955"



Digging Out the West Side Mine Fire. Photograph in the Frank and Kitty Kelly Collection of the Carbondale Historical Society. Photograph taken by John M. Cramer on June 7, 1955, and signed on the reverse "J M Cramer"; photograph stamped on back: "Cramer Studio / Portrait & Commercial Photographers / 19 No. Main Street / Carbondale, Penna. /Jun 7 1955"



Gordon Avenue

Digging Out the West Side Mine Fire. Photograph in the Frank and Kitty Kelly Collection of the Carbondale Historical Society. Photograph taken by John M. Cramer on June 7, 1955, and signed on the reverse "J M Cramer"; photograph stamped on back: "Cramer Studio / Portrait & Commercial Photographers / 19 No. Main Street / Carbondale, Penna. /Jun 7 1955"



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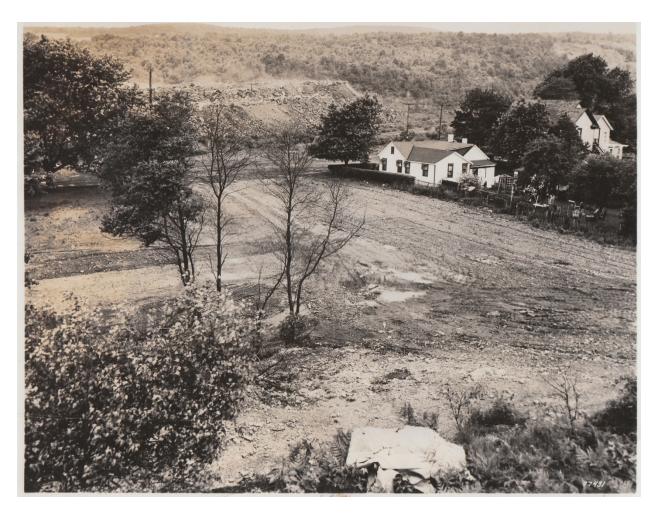
Digging Out the West Side Mine Fire. Color Photograph in the Frank and Kitty Kelly Collection of the Carbondale Historical Society. This Kodachrome enlargement was produced in December 1961.



Houses on Carbondale's West Side. This photograph was taken by the Bureau of Mines, Department of the Interior. Photograph in the Frank and Kitty Kelly Collection of the Carbondale Historical Society.



Houses on Carbondale's West Side. This photograph was taken by the Bureau of Mines, Department of the Interior. Photograph in the Frank and Kitty Kelly Collection of the Carbondale Historical Society.



Houses on Carbondale's West Side. This photograph was taken by the Bureau of Mines, Department of the Interior. Photograph in the Frank and Kitty Kelly Collection of the Carbondale Historical Society.



Filling In the West Side Mine Fire Excavation Site. This photograph was signed on the reverse by John M. Cramer as follows: "J M Cramer"; also on the reverse is the Cramer Studio rubber stamp: "Cramer Studio / 19 N. Main Street / Carbondale, Pa" On a label attached to the reverse of this photograph is the following identification for this photograph: "Carbondale, Pa./ 8<sup>th</sup> Ave. at D & H Crossing / Looking west at Brooklyn / Street location and / showing beginning of fill. /August 22, 1962" Photograph in the Frank and Kitty Kelly Collection of the Carbondale Historical Society.



Filling In the West Side Mine Fire Excavation Site. This photograph was signed on the reverse by John M. Cramer as follows: "J M Cramer"; also on the reverse is the Cramer Studio rubber stamp: "Cramer Studio / 19 N. Main Street / Carbondale, Pa" On a label attached to the reverse of this photograph is the following identification for this photograph: "Carbondale, Pa. / Looking south along D & H / tracks at side view of / Brooklyn St. fill. /Aug 22, 1962" Photograph in the Frank and Kitty Kelly Collection of the Carbondale Historical Society.



Filling In the West Side Mine Fire Excavation Site. Photograph taken of downtown Carbondale from the western edge of the mine fire. Photograph in the Frank and Kitty Kelly Collection of the Carbondale Historical Society.



Filling In the West Side Mine Fire Excavation Site. Photograph taken of downtown Carbondale from the western edge of the mine fire. Photograph in the Frank and Kitty Kelly Collection of the Carbondale Historical Society.



Starting Over: Construction of Ames Plaza on a Portion of the West Side Mine Fire Site. Photograph in the Frank and Kitty Kelly Collection of the Carbondale Historical Society.

## Carden Mine Fire Photographs:

On May 29, 2012, Michael Carden (graduated from Ben Franklin High School in 1959; he is the son of Joseph P. Carden of Belmont Street, Carbondale) donated to the Carbondale Historical Society the two mine fire photographs that are given below.



"Joseph P. Carden, Operating John Booth Steam Shovel, Carbondale Mine Fire Excavation" This photograph is numbered "S1062", which suggests that it is one of a series of photographs of the Carbondale Mine Fire taken by this photographer (as yet unidentified).



"Joseph P. Carden, Operating Steam Shovel in the Pit, Carbondale Mine Fire Excavation." Photo by Ros-Al, Carbondale.

Michael Carden, May 29, 2012): "The other shovel operators who worked in the excavation were 'Styke' Chellino, John Niemitz, Carl Phillips, and Carl Emmett. Dominic Andidora was one of the Euclid [truck] drivers."

## Father Barnabas Gorski Mine Fire Photographs:

Father Barnabas Gorski was a Franciscan missionary who was born in Brooklyn, New York. He served as a Missionary Father at Sacred Heart church in Mayfield, PA in the 1960s. During his time at Sacred Heart, he held 40-hour devotions, which were very popular with the church members there. On October 19, 1965, the photograph given below of him, standing by the side of the West Side Mine Fire urban renewal sign, was taken.

This photograph was given by Ed and Martha Lubash (570-876-2505) to Carbondale Mayor Justin Taylor, in November 2016, with the following note: "Dear Mayor, / Enclosed is a picture of West Side Mine Fire Area sign. I don't know if the [Historical] society has a picture like this. I thought I would send it on to you. The picture was taken back in 1965." In November 2016, Mayor Taylor gave the photograph to the Carbondale Historical Society. On November 28, 2016, S. R. Powell phoned Martha Lubash and thanked her for the photograph and her thoughtfulness. She was very pleased to receive the call, and spoke very fondly of Father Gorski and his missionary service in Mayfield. She reported that "Father Gorski recently passed away in Morocco, Africa."



Father Barnabas Gorski, OFM, Standing by the Carbondale Mine Fire Urban Renewal Sign, October 19, 1965. Photo given to the Carbondale Historical Society by Ed and Martha Lubash, Mayfield, November 2016.

Three additional photographs from Ed and Martha Lubash that were taken on October 19, 1965 (l) at the site of the Carbondale West Side Mine Fire, and (2) at the summit of Salem Mountain above Carbondale (photos donated to the Carbondale Historical Society on November 30, 2016).



Father Gorski at the Mine Fire Site



Fire Tower on Salem Mountain



Paul Lubash, Father Gorski, and Al Meholic (Lackawanna County Fire Warden) at the Base of the Fire Tower on Salem Mountain. During this visit, Father Gorski climbed to the top of the tower.

## Fr. Barnabas Gorski (1933-2015)



Medard Gorski was born in Brooklyn, New York, on February 5, 1933, to Zygmunt and Monica (Sikorski) Gorski. He was baptized on February 26, 1933, at St. Stanislaus Kostka Parish, Brooklyn, New York. Medard completed his elementary education at St. Stanislaus Kostka School, Brooklyn in 1948. He attended St. Agnes High School from 1948 to 1950, then entered St. Bonaventure High School and Minor Seminary, Sturtevant, Wisconsin graduating in 1951.

Medard entered the novitiate and was invested with the Franciscan habit at Assumption B.V.M. Friary, Pulaski, on August 14, 1951, at

which time he was given the religious name "Barnabas". He completed the novitiate at Queen of Peace Friary, Lake Geneva, and made simple profession on August 15, 1952. Barnabas made his solemn profession on August 15, 1955, in the hands of Theophane Kalinowski, OFM, at St. Francis Friary, Burlington. Following his novitiate year, Barnabas entered St. Francis Seminary, Burlington, where he completed his undergraduate studies in Philosophy in 1956. He then moved to Christ the King Seminary, West Chicago, where he completed his theological studies in 1961. Barnabas was ordained to the priesthood on February 2, 1960, by Bishop Stanislaus V. Bona at Christ the King Seminary.

His first assignment in 1961 set the stage for the future of his predominant ministry when he moved to St. Anthony Friary, Pittsburgh, and entered the "Mission Band" as a Home Missionary. In July of 1964, Barnabas sent his first of a number of letters to Remigius Steczkowski, OFM, provincial, requesting permission to attend Duquesne University as a full-time student. Noting that "our missionary forces at present are weak and wanting" and a concern for a lack of friars who speak two languages, Remigius granted Barnabas permission to attend summer classes. Finally, in 1968, Barnabas was allowed to enroll in the Institute of Man program at Duquesne where he graduated with a M.S. in Religious Anthropology in 1971.

At this time in his life, Barnabas was asked to make a ministry change and join the pre-novitiate formation team at Tau Fraternity, Milwaukee, Wisconsin. In 1973, he was made the novice director of the first novitiate class to be formed in four years. He along with John Liczner and Eugene Kleczewski reopened the novitiate of the Assumption BVM Province in Valparaiso, Indiana.

Barnabas was called back to the life of a home missionary when he returned to St. Anthony Friary in 1974. After a year, he was appointed the Guardian and Director of Retreats at Lourdes Friary where he remained until 1981. Appointed as the Provincial Spiritual Assistant to the Secular Franciscan Order, Barnabas moved to St. Francis Friary, Burlington. However, his ministry as a home missionary was not yet complete, and once again he returned to the work of the mission band and moved to Sacred Heart Friary, Canton, Massachusetts. He continued in this ministry, later living at St. Pius X Friary, Philadelphia until 1992.



It was at this time in his life that Barnabas changed from home missionary to foreign missionary requesting permission to be missioned to Morocco. Following a one month stay in the country in 1992, Barnabas was convinced this is where he needed to be. He followed up his decision to go to Morocco with a stay of nine months in France learning French. He settled in Morocco in 1993 and made his home there between the two cities of Casablanca and Marrakech.

During these years, Barnabas returned to the United States most summers in order to conduct mission appeals and to tend to his health.

Although he accepted mission appeals far and wide in the United States, he concentrated on the East coast and the Midwest. Also, he was often called to parishes that requested an English and Polish speaking priest. On more than one occasion, the welcome given to Barnabas was not the warmest nor were the accommodations always appealing, but he always had a knack of turning most situations into an adventure which included at least one shopping spree.

While staying in friaries of the province, he would fill the room with stories of his ministry and life in Morocco. For anyone who knew Barnabas, they would say that he had a zest for life, a thirst for knowledge and a little bit of a prankster in him. He saw the world through a different set of eyes and responded to it that way.

On Tuesday, April 27, 2015, John Puodziunas, minister provincial, was informed by Bob Mokry, OFM, the guardian of his friary in Casablanca, that Barnabas was found unconscious on the floor of his room after he did not appear for Mass during a retreat he was leading. He was taken to the hospital where he was diagnosed with a brain aneurism and remained unconscious. Barnabas died at the hospital on Sunday, May 3, 2015, in Casablanca, Morocco, in the 82nd year of his life, the 62nd year of his religious profession and the 55th year of his priesthood.

Barnabas is survived by a brother Edwin, sisters Rita Swierczewski and Dolores Krive, and the brothers of the Assumption BVM Province.

A memorial fund in Barnabas' name has been established to support the Franciscan Friars in home and foreign missions. Gifts may be sent to Franciscan Friars c/o Fr. Barnabas' Memorial, 9230 West Highland Park Avenue, Franklin, WI 53132.

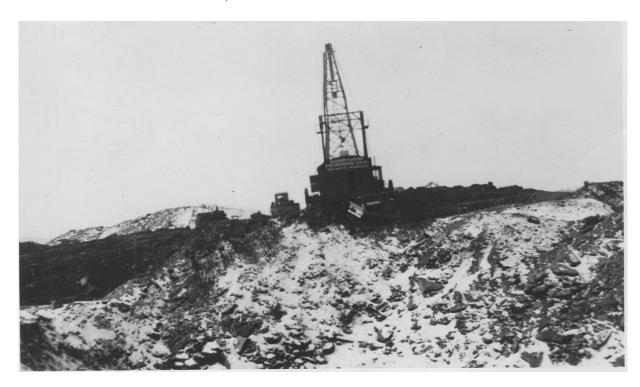
On Tuesday May 5, 2015, a Mass was celebrated at Christ the King Parish, Casablanca, Morocco, Fr. Manual Corullon, OFM, presiding. On Thursday, May 7, 2015, a Mass was celebrated at Holy Martyrs Franciscan Church, Marrakech, Morocco, with Bishop Vincent Landal presiding. Burial will take place in the Franciscan crypt in Morocco. Memorial services for the family were celebrated by Camillus Janas, OFM, in New York on May 7, 2015. The friars of the Assumption BVM Province will celebrate a memorial Mass at a later date.

## **Mizianty Mine Fire Photographs:**

Gasparini Excavating Company Photos:

Given below are eleven Carbondale West Side Mine Fire photographs that were donated to the Carbondale D&H Transportation Museum by Thomas Mizianty, Waymart, PA, on December 12, 2016. One of the companies that helped dig out the mine fire was Gasparini Excavating Company, Inc., 1439 Main Street, Peckville, PA. These eleven photographs are of the Gasparini operations at the West Side Mine Fire.

1. Photo dated on reverse: Feb 20, 1956





Skip Race (03-23-17): "Gasparini hauled in the components of 'the walkers' and then assembled them."

3. Written on the reverse of this photograph is: "In Memory of / Hubert Vaverchak / 2/20/56"



4. Written on the reverse of this photograph is: "In Memory of / Hubert Vaverchak / 2/20/56"



5. Written on the reverse of this photograph is: "In Memory of / Hubert Vaverchak / 2/20/56"















## General Views of West Side Mine Fire

Given below are six general views of the Carbondale West Side Mine Fire that were donated to the Carbondale D&H Transportation Museum by Thomas Mizanty, Waymart, PA, on December 12, 2016.













On June 6, 20116, Tom Mizanty (11 Mizanty Lane, Waymart, PA 18472) wrote to the author to bring to his attention a present-day mine fire in the Powderly Street area. He said: "I note two other issues concerning Carbondale. . . The [second] is "the Powderly Creek Mine Fire. Starting near Russell Park and now extending even down to Powderly Street despite efforts to contain it. I hope we don't have another West Side Mine Fire disaster. As a kid, I knew those hills. There was an area called the 'flat rocks' where the boulders were immense with crevices where a kid could crawl in between. . . I could see that area being destroyed from the Casey Highway. I note one area of silt deposit is called the Bushwick silt area. Alas, all of my efforts to have 'The Bush' section of Carbondale Twp. returned to its original name have fallen on deaf ears. My mother (who graduated from Benjamin Franklin High School in the same year as your mother) remembered it as Bushwick." Note by the author: Bushwick Junction is the official name that the D&H gave to the location in Carbondale Township where empty Gravity coal cars from Honesdale and D&H passenger cars from Honesdale could be moved onto Level 27 for the trip into downtown Carbondale. From 1868 on, the area of Carbondale Township in the vicinity of Bushwick Junction was popularly referred to as "the Bush." Many folks who live in Carbondale Township today in the vicinity of the site of Bushwick Junction continue to refer to that section of Carbondale Township as "the Bush," all the while not knowing anything about the history of that section of Carbondale Township.

Given below are eight photographs, all titled "Center Street Subsidence,: that were donated to the Carbondale D&H Transportation Museum by Thomas Mizianty, Waymart, PA, on December 12, 2016. These subsidences were the result of underground mining in the Center Street area of Carbondale.

Here are the notes/comments from Tom Mizanty on these photographs: "Mine subsidence. Center Street, Bushwick, down Kane Street to join Gordon Avenue again at the City line border. This one even made national news. I heard it myself on *Kate Smith Speaks*, the most popular of the midday news, song, and chat programs on radio (CBS 1938-1951). One of my grade school teachers had to be rescued from a second floor window (the house had sunk that low) at the corner of Kane and Gordon Avenue. Mid 40's. Date unknown."

















Given below are twelve photographs, all titled "Upper Powderly [Street] Subsidence," that were donated to the Carbondale D&H Transportation Museum by Thomas Mizianty, Waymart, PA, on December 12, 2016. These subsidences were the result of underground mining in the Upper Powderly Street area of Carbondale.

Here are the notes/comments from Tom Mizanty on these photographs: "Mine subsidence. Upper Powderly Street. Mid 40's; precise date unknown. Mainly in the Bushwick section of Carbondale Twp. but at least one residence (the one with the boarded garage) was within the Carbondale City limits. This area is now being reshaped and graded by Mike McConnell. He already has one new home built there. Lots are available for other homes. However, the spreading Russell Park mine fire may threaten this development."

















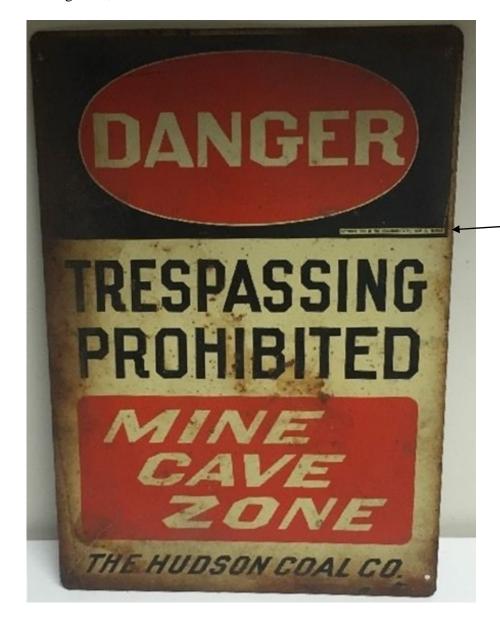




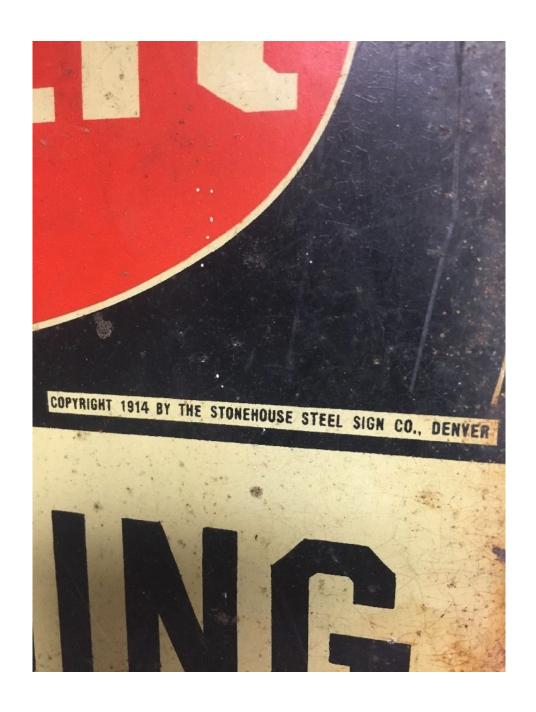




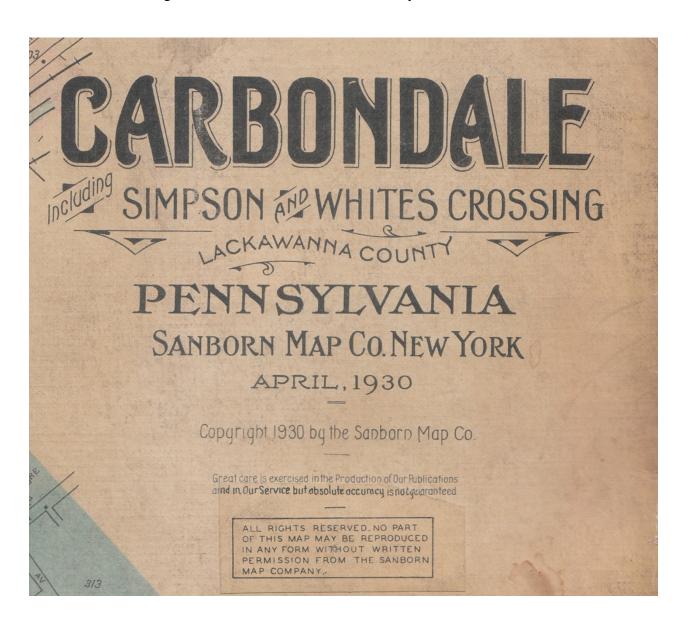
For sale on E-Bay, March 13, 2017: *Mine Cave Zone* sign, 13 ½" x 9 ½", Copyright 1914 The Stonehouse Steel Sign Co., Denver.

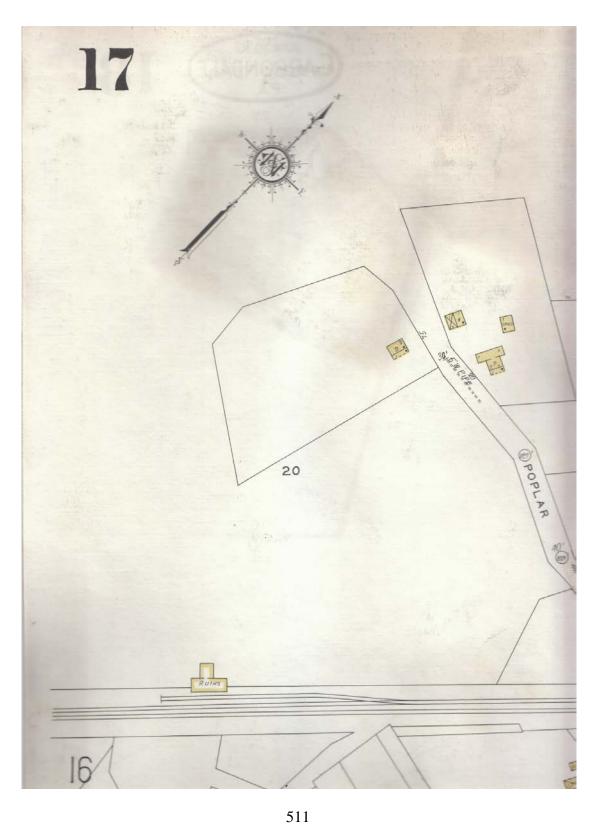


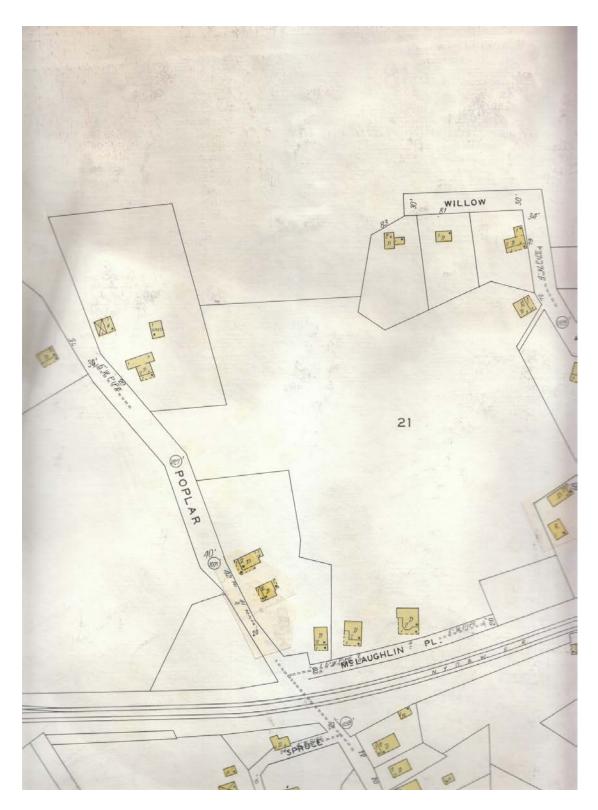
"Copyright 1914 By The Stonehouse Steel Sign Co., Denver"



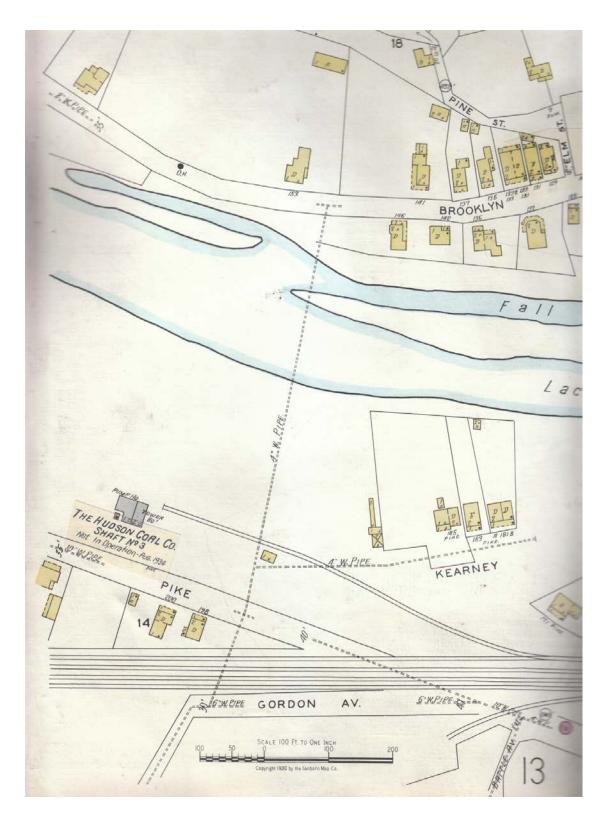
What was the layout of the streets and the location of the houses/businesses on the West Side before the West Side Mine Fire? The answer is given on the April 1930 *Sanborn Map of Carbondale, Including Simpson and Whites Crossing,* as shown below on pages 17-19 in that volume, in the holdings of the Carbondale Historical Society.

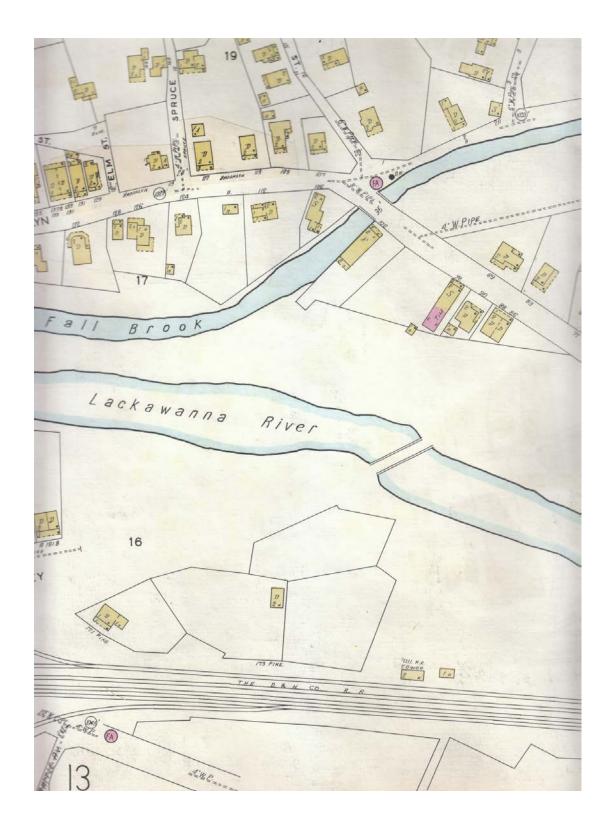


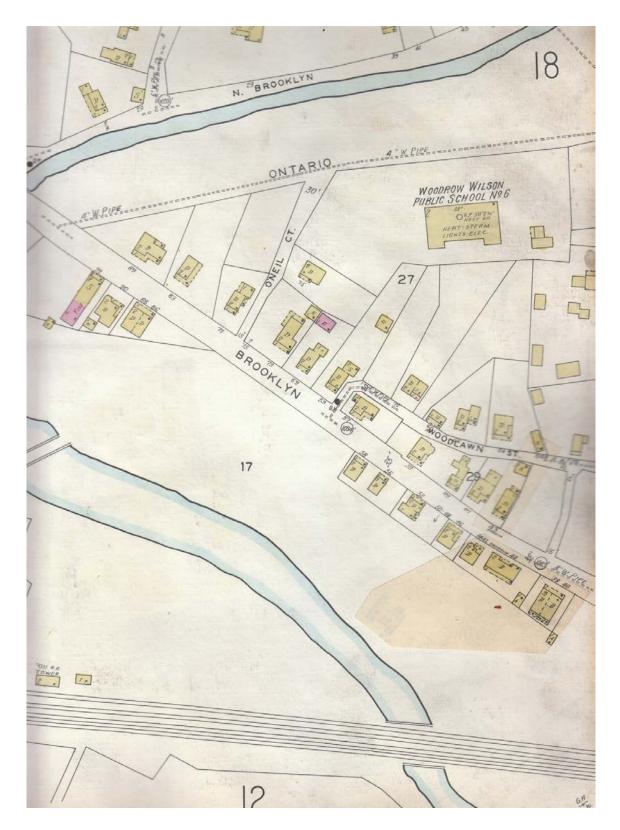


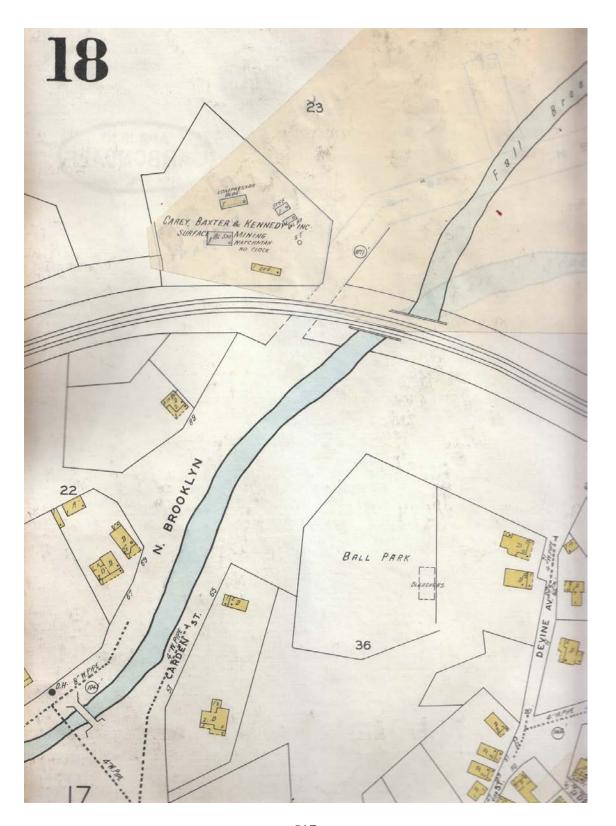


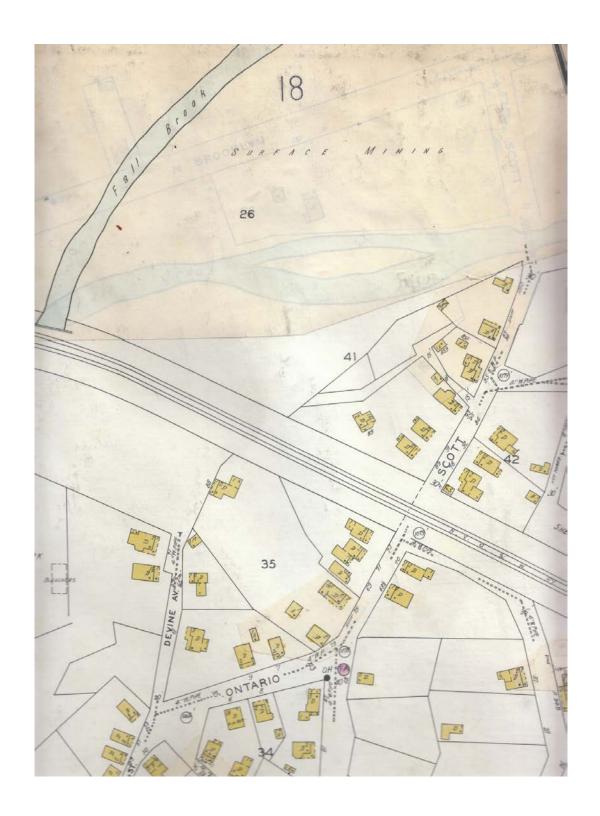


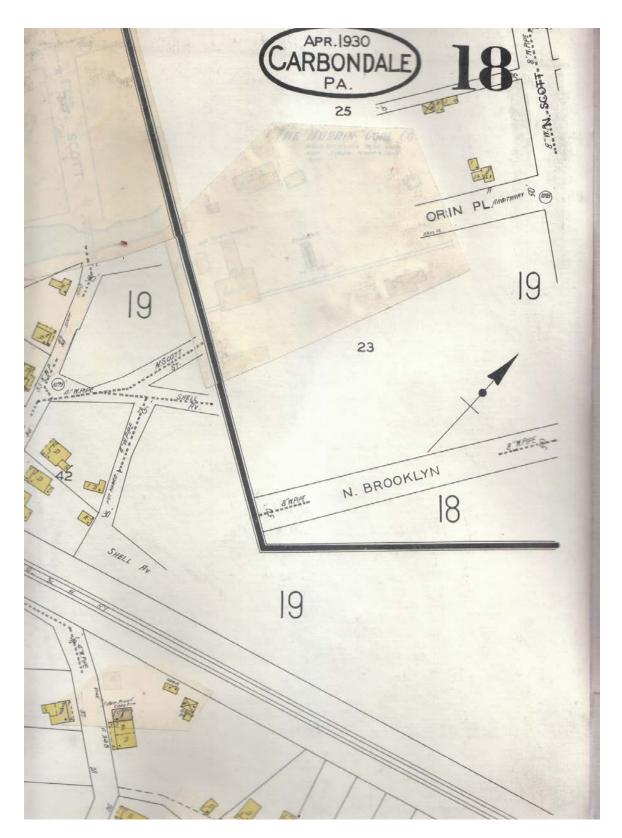


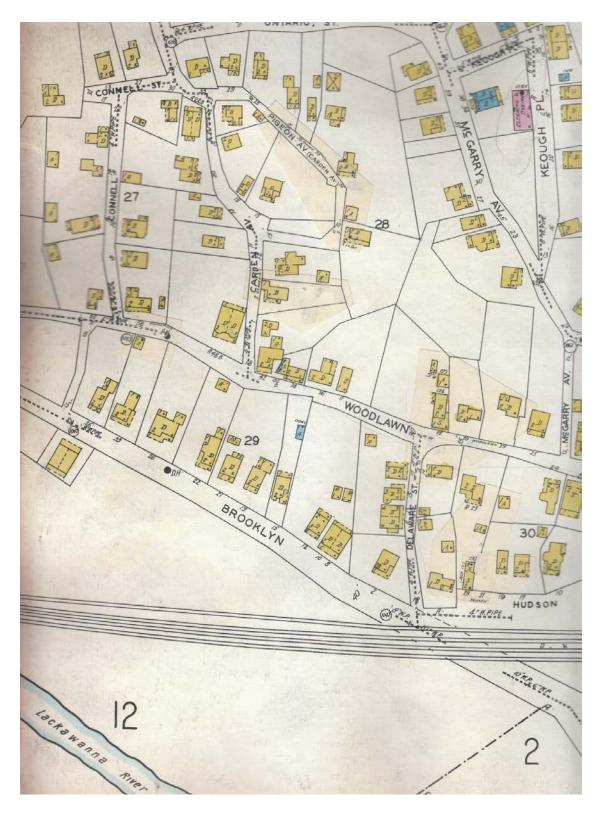


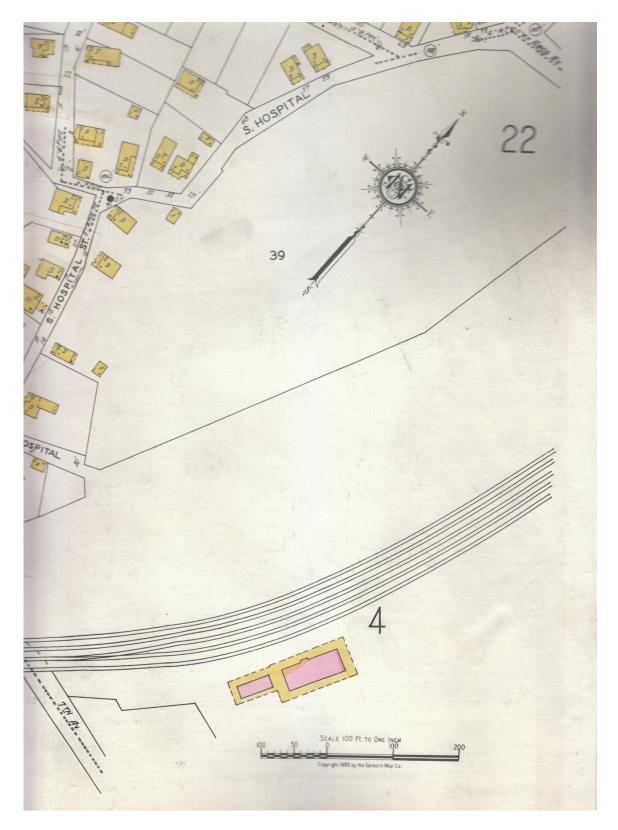


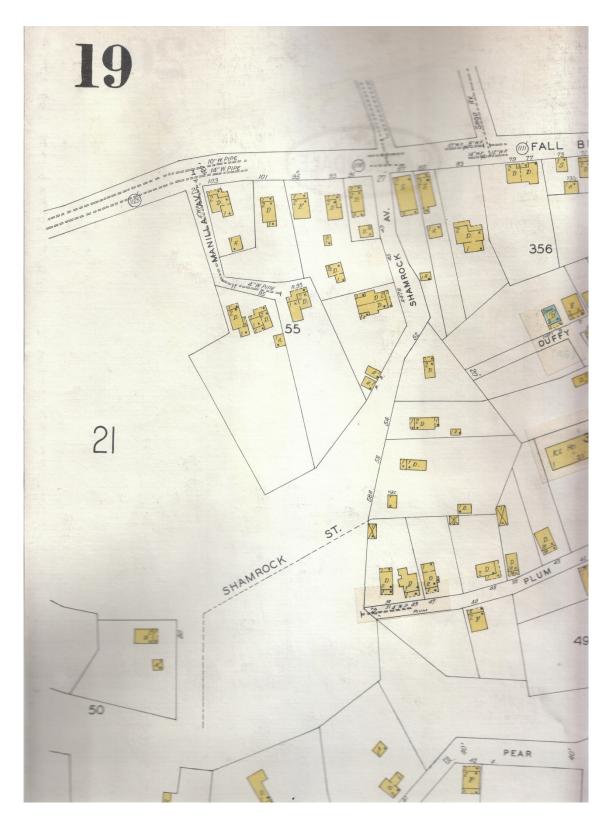


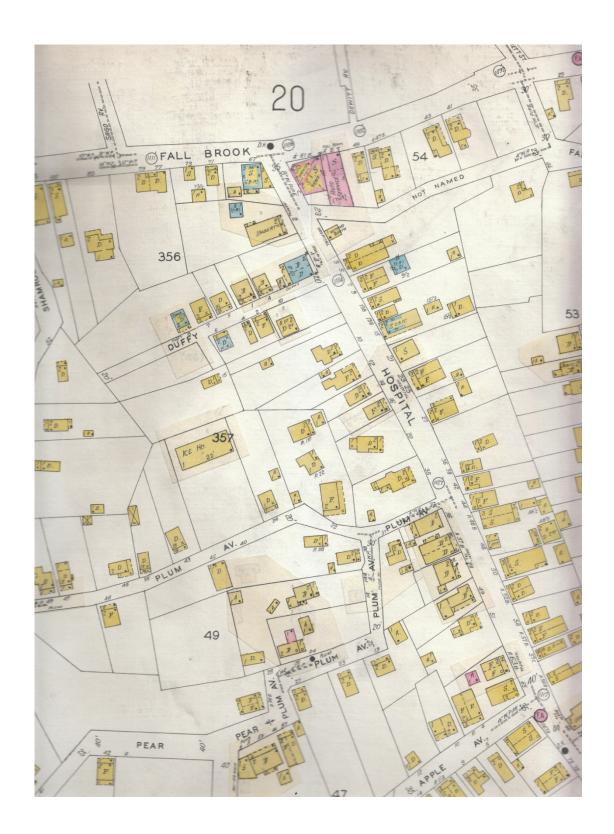




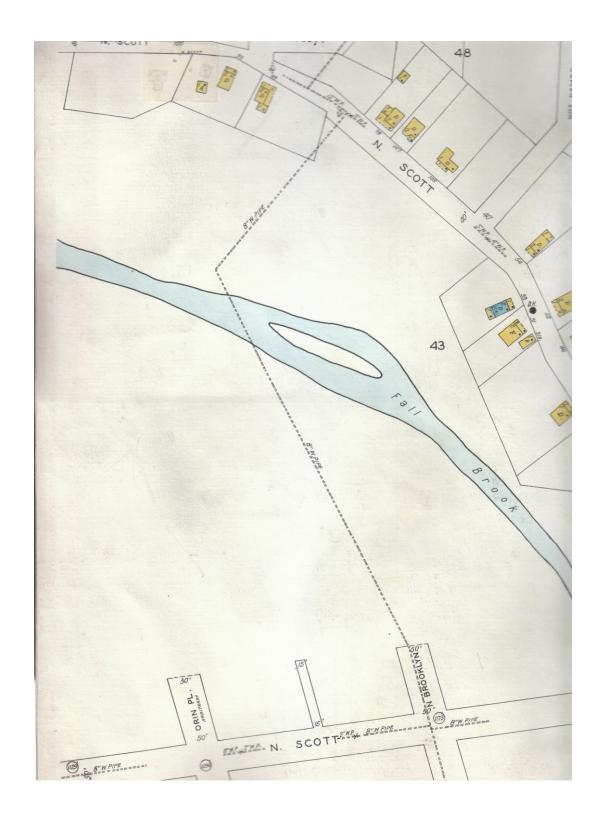


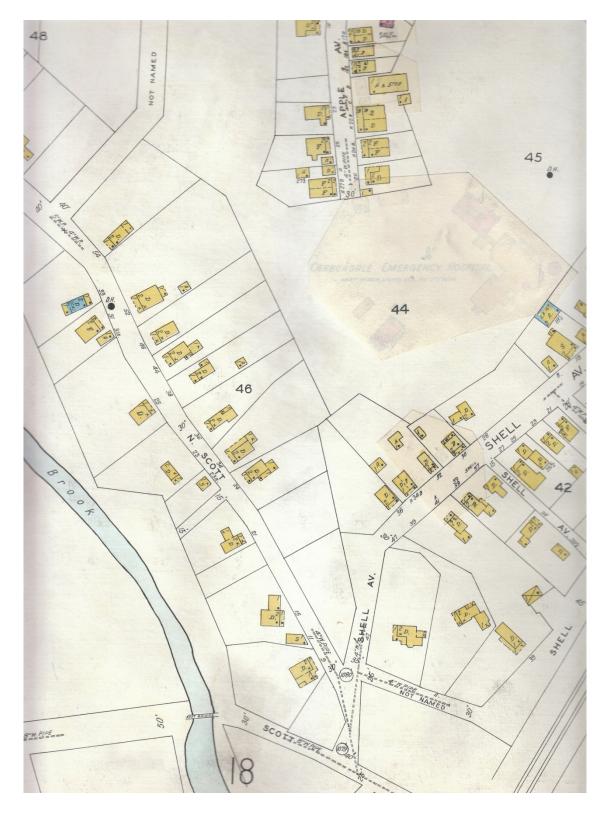


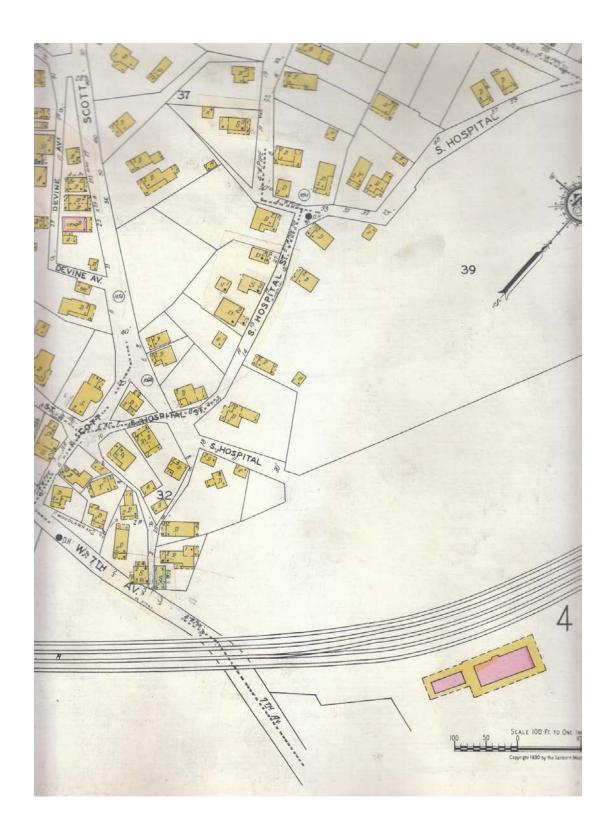


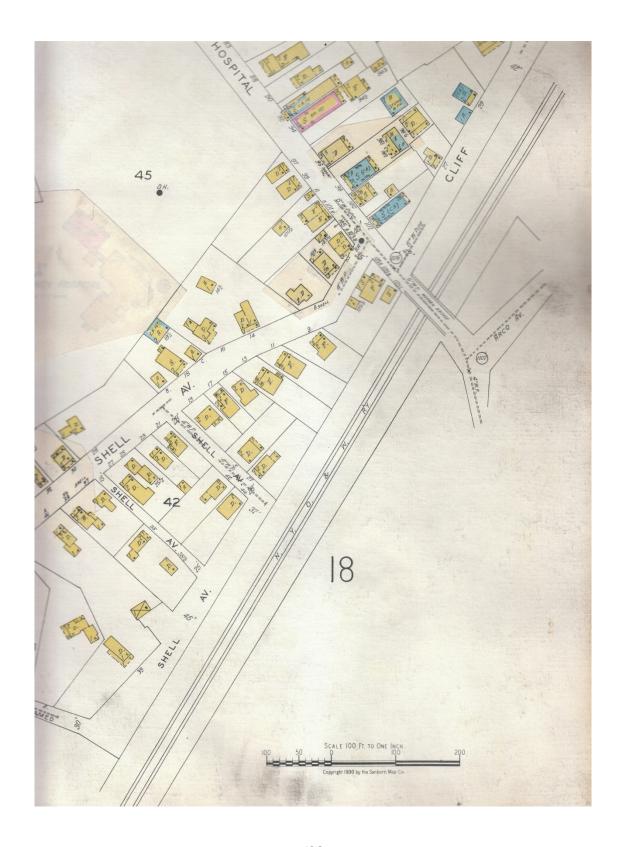












In 2011, the University of Scranton Press published Kathleen Purcell Munley's 178-page book titled *The West Side Carbondale Pennsylvania Mine Fire*. The archives and research materials of the Carbondale Historical Society and Museum and the Carbondale D&H Transportation Museum were made available to Ms. Munley as she worked on her book. Many photographs from the archives of the Society were lent to Ms. Munley for her book. A review of the book by Tom Klopfer was published in the October 2013 issue (Volume 15, No. 4) of *The Searcher*, the newsletter of the Genealogical Research Society of Northeastern Pennsylvania, Inc.

1719

## Poisonous Gas, Water Problems, and Fires in the Mines

Proper Ventilation in the Mines:

Proper ventilation in the mines of the anthracite coal regions in 1877 was a major problem. The humanitarian perspective of the inspector, expressed in his 1877 report given below (*Reports of the Inspectors of Mines of the Anthracite Coal Regions of Pennsylvania*, 1877, pp. 128-129), is well reasoned and commendable, even though it does not reflect a rigid interpretation of the laws in place with regard to proper ventilation in the mines:

"I might have procured injunctions to close a large number of collieries, for the want of proper ventilation. All the mines of the Delaware and Hudson Canal Company, at Carbondale; Jermyn's shaft and slope, at Jermyn; White Oak mines, D. & H. C. Co., and Jones, Simpson & Co.'s mines at Archbald; Grassy Island shaft and part of Eddy Creek shaft, D. & H. C. Co., Olyphant; Fair Lawn slope, Hosie, Archbald & Hosie, Scranton; Park Coal Company's slope, Hyde Park; Sibley shaft, Penn. Anthracite Coal Company, Old Forge township; Greenwood mines, belonging to the same company, Lackawanna township; Columbia Mines, Groves Brothers; Rock Hill tunnel, Bowkley & Sons; Beaver mines, Waterman & Beaver; Seneca slope and Ravine shaft, Pittston Coal Company, all of Pittston; Everhart colliery, Hon. Thomas Waddell, Jenkins township, and several of the Pennsylvania Coal Company's mines in the same township and elsewhere. All of the above named collieries could have been closed by injunction, for the want of the amount of air the law requires [emphasis added]. But, had I proceeded against them according to a rigid construction of the law, the majority of them would have remained idle during the greater part of the year, and hundreds of poor workmen, who, with their families were already nearly in a starving condition, would have been thrown out of employment, and would have suffered tenfold more privation and want than they have suffered. I could not enforce the law with severe exactness, with these painful facts staring me in the face, though my desires were intense to force and hurry up the improvements which were so sorely needed. If I have erred in being too lenient under a strict construction of the law, my conscience does not reprove me, and I believe that all good men will commend the course I have pursued, and that the workingmen will do me the justice of admitting that I have tried to do what was for their best good. Of two evils I have undoubtedly chosen the least. The companies have complained that I have been too severe with

them, as most of them do when they are asked to do anything for the good of their employes, especially if it requires the expenditure of a sum of money; but they have no cause to complain of my dealing too severely with them. They ought rather to thank me for not visiting punishment upon them for their persistent disregard of the law, for long years after it was enacted. It is true that I have given them no peace, and I do not intend that they shall have peace until they comply with the law in every particular. / It would have been much easier for me to take the course laid down in the fifth section of the mine ventilation act, but, under all the circumstances, I firmly believe that I have accomplished more good, though at the expense of much greater labor, by the course I have pursued."

In the same report (*Reports of the Inspectors of Mines of the Anthracite Coal Regions of Pennsylvania*, 1877, p. 130), the inspector reported, in a section of the report titled "What has been Accomplished," the following improvements in ventilation that have been made by the D&H, the Pennsylvania Coal Company, and the DL&W in their mines with regard to ventilation.

"The Delaware and Hudson Canal Company have made some valuable and much needed improvements, but it has been like pulling teeth to get them to do anything. They have taken over a year to do what ought to have been done in two months at the furthest, but I am very grateful for what has been done. They have erected two new seventeen-feet fans at Carbondale, which are to ventilate No. 1 and No. 3 shafts and White Bridge tunnel. These are the first fans ever erected at Carbondale, and if the air courses are improved, so as to conduct the air properly through the face of the workings, they will inaugurate a new era in their ventilation. / The five tunnels, constituting the Coal Brook colliery, should and must have two fans in place of the three furnaces which are now robbing the company and cheating the workmen. White Oak mine, Archbald, and Grassy Island shaft, Olyphant, need a fan each, and then the Delaware and Hudson will go ahead of the Pennsylvania Coal Company, and take its place second on the list. They might be placed alongside of the D. L. & W. were it not that they will never have their air courses in as good as condition are those of the latter company. I expect the D. & H. C. Co. will go on making these other improvements during 1878."

Also in the Reports of the Inspectors of Mines of the Anthracite Coal Regions of Pennsylvania, 1877, p. 131, there is a very interesting section on Plans, or Maps of Mines. In this section, the inspector, was one of the miners trapped in the 1846 mine cave in Carbondale, stressed the importance of complete and true maps of all the workings of every mine and colliery for the safety of the miners. That same inspector makes the point that at the time of the 1846 mine cave in Carbondale there were no plans or maps of the mine in question, and had it not been for the fact that Alexander Bryden, Esquire knew every yard of the workings, and was brave enough to work his way through the old workings and over the edges of the cave, about sixty men would have been lost. Here are the comments of the 1877 inspector of mines on the question of plans, or maps of the coal mines:

"The first section of the mine ventilation act has a clause which required that a complete and true map of all the workings of each coal mine or colliery, as they stood when the law was enacted, should be furnished to the inspector within four months from that date. The marking of those maps with the words 'Worked out,' or 'Old workings,' covering all up to the time the act was passed, in my opinion, was not a compliance with the law. I feel positive that it was intended that the inspector should have a true and correct map of all the workings up to that date; and circumstances may arise at any time when it may be of the greatest importance that he should have them in his possession. Extensive caves are liable to happen at any time, closing up the main traveling ways, and inclosing the men employed inside of the cave, when it would be necessary to find a way into the men through these very old workings, the maps of which are refused to the inspector, and which would be guides for him if had them. Such caves have already occurred, and I have myself experienced the painful sensation of being entombed in this manner; and had it not been that there was one man, Alexander Bryden, Esquire, who knew every yard of the workings, and who was brave enough to work his way through the old workings and over the edges of the cave, about sixty men would have been lost. I refer to the extensive cave at Carbondale on the 12<sup>th</sup> of January, 1846, where fifteen lives were lost. / It may be argued that there are second openings now at all collieries—which, however, so far as tunnels and drifts are concerned is not the case—but even admitting that there are second openings now to all our collieries, so there were at Carbondale in 1846. There were five opening there, but they were all closed."

An excellent account of the several different gases (firedamp, afterdamp, blackdamp, whitedamp) found in coal mines, which, in the absence of proper ventilation, endanger the lives of miners is given in *Miller and Sharpless*, pp. 106-107. Here is that account:

"In the mines workers were threatened by several dangerous gases given off by coal. The most abundant is methane gas (CH4), known to the miners as 'firedamp.' About half the weight of air, it rises and accumulates along the roofs of chambers. At times it suddenly issues from cracks in the coal wall, spewing out in a stream called a 'blower.' When a miner's lamp came into contact with a large volume of gas, a tremendous explosion destroyed everything in its path. Miners who survived the initial blast threw themselves on the mine floor and buried their mouths, noses, and eyes in the damp dirt to escape the flames and searing heat. They waited until the gas burned itself out, then quickly scrambled to their feet and fled, for the by-product of firedamp was an even more deadly gas known as 'afterdamp." This is carbonic acid mixed with some nitrogen. It is heavier than air and gathers along the floor. A single inhalation of afterdamp in its pure state results in unconsciousness and certain death. A constituent of afterdamp is 'blackdamp,' pure carbonic acid gas. It is given off by coal in the same manner as firedamp and frequently the two mixtures evolve together. Also a heavy gas, it gathers along the floor of the mine. Inhalations of small quantities of blackdamp dull the mind and numb the body. In larger quantities it brings

sudden death. / Though its presence is less frequent than the others, the most dangerous gas is carbonic oxide, known as 'whitedamp.' It is odorless and tasteless and usually cannot be detected until it does its fatal work. It is formed when carbonic acid passed through ignited carbonaceous material and is produced by smoldering gob fires, burning wood in the mines, or as a result of explosions of firedamp or blasting powder. Miners who had the good fortune to escape explosions of firedamp and the other toxic gasses has little chance for survival if they encountered the dreaded whitedamp.\*"

\* More on whitedamp: Carbon monoxide, formerly known as carbonic oxide, carbonic-oxide gas, and whitedamp, has a formula, CO, It is odorless, colorless, and tasteless, and supports neither life nor combustion. It burns with a bright bluish flame and is explosive when mixed with air in the proper proportions. The gas is so extremely poisonous that its presence in mine air indicates conditions that should be investigated and remedied at once.

On the subject of dangerous gases in coal mines, *Miller and Sharpless* refer the reader Homer Greene, *Coal and the Coal Mines*, 1889, chapter 12.

In Miller *and Sharpless*, p. 107, we read the following about the Davy lamp, which was used to detect dangerous gases in coal mines:

"Miners fought their battles against gas in several ways. In the early days dogs were sometimes lowered into suspected gaseous areas. If the dog was not breathing when he was hauled to the surface, the miners figured his death had saved their lives. Miners also carried caged canaries into their working places; the theory held that the small lung capacity of the birds would cause them to be overcome first if gas were present. Eventually a safety lamp, called a 'Davy,' [introduced in England by Sir Humphry Davy and Michael Faraday] was developed to test for gas. The lamp flame was enclosed within a fine wire gauze; if a gas were present, small quantities seeped through the gauze, causing the flame to flare up. Similar but more sophisticated versions of this type of test lamp have been used since the Davy was introduced in the nineteenth century."

On the use of canaries, and mice to detect the presence of dangerous amounts of carbon monoxide in the afterdamp in the coal mines. In the McGraw-Hill *Miners' Pocketbook*. . . : , we read the following:

"Use of Canaries or Mice.—In recovery work after a mine explosion, the existence of dangerous amounts of carbon monoxide in the afterdamp is commonly determined by the effect of the gas upon mice or canaries carried in a cage by some one of the exploring party. When advancing

with the air, the last man should carry the animals, and when moving against the air, the first man, so that they may be exposed to the air and its effects on them noted before the men enter it. Canaries are preferred to mice as they are more sensitive to the action of the gas, and their signs of distress while perched are more easily noted than those of mice who are apt to crouch in a corner of the cage. If a mouse is used, it must be made to move from time to time by tilting the cage, poking it with a stick, etc., so that, while moving, its symptoms may be noticed. The rate of breathing, number of heart beats, etc., in a mouse or canary, are so much more rapid (pulse about 700 to 1,000 beats a min.) than in a man, that the effects of the gas on them is much more rapid."

The chart given below from the Bureau of Mines shows the effect on mice and canaries of varying percentages of carbon monoxide. A canary exposed to an atmosphere containing .20% CO will show distress in 1 1/2 minutes, and fall from a perch in 5 minutes. For a man, walking, it will require ½ hour for the blood to become 50% saturated, at which stage the legs will give way. The more rapid effect, in most instances, of CO on mice and canaries, therefore, made them highly useful in the quick detection of CO in the atmosphere in the mines. Here is that chart from page 857 of the McGraw-Hill *Miners' Pocketbook*. . . , p. 857:

| Mice         |   | Canaries           |   |
|--------------|---|--------------------|---|
| Per<br>Cent. | Effect  | Per<br>Cent.<br>CO | Effect  |
| .16          | Very slight distress at end of hour.  | .09                | Very slight distress at end of 1 hr.  |
| .20          | Distress in 8 min.; partial collapse in 15 min.   | .12                | Weaker at end of 1 hr. than after exposure to .9%   |
| .31          | Distress in 4 min.; collapse in 7½ min.; lost muscular power in 35 min.                 | .15                | Distress in 3 min.; fell from perch in 18 min.  |
| .46          | Distress in 2 min.; collapse in 4 min.  | .20                | Distress in 1½ min.; fell from perch in 5 min.  |
| .57          | Distress in 1 min.; collapse in 2 min.; muscular power lost in 7 min.; death in 16 min. | .29                | Fell from perch in 2½ min.  |
| .77          | Distress in 1 min.; muscular power lost in 6½ min.; death in 12½ min.                   |                    | (i±0) |

At The Royal Institution website, we read the following about the development and history of the Davy lamp:

"Following a number of serious explosions in North East coal mines due to pockets of flammable gas known as 'firedamp', Humphry Davy was asked by the Rector of Bishopwearmouth (near Newcastle) to find a means of lighting coal mines safely. In an intense period of work from mid-October to December 1815, Davy made various prototype lamps. The final design was very simple: a basic lamp with a wire gauze chimney enclosing the flame. The holes let light pass through, but the metal of the gauze absorbs the heat. The lamp is safe to use because the flame can't heat enough flammable gas to cause an explosion, although the flame itself will change colour.

The lamp was successfully tested in Hebburn colliery in January 1816 and quickly went into production. The introduction of the lamp had an immediate effect, decreasing the number of fatalities per million tons of coal produced enormously and also increased the amount of coal produced as it allowed miners to mine deeper seams of coal. In this way it made a fundamental contribution to the continuing industrialisation of Britain and to many other mining countries, during the nineteenth century.

At precisely the same time however George Stephenson, a mining engineer at Killingworth Colliery, was also working on the problem. He independently invented a remarkably similar lamp and soon the two inventors were locked in a bitter dispute over priority. Davy needed to differentiate his lamp from Stephenson's and therefore claimed that his invention was the product of scientific research, despite there being very little science in it - indeed the only science in the lamp is the discovery (made independently by Davy, Stephenson and Smithson Tennant) that explosions would not pass through narrow tubes. Davy won this battle of words going on to become President of the Royal Society, while Stephenson went on to invent the first steam powered locomotive for the railroad."

Here is a post card photo of "The Davy Lamp" that was purchased by the author at the Big Pit National Coal Museum in South Wales on July 2, 2017:



The Davy Lamp

On September 14, 1889, Andew B. Nicoll, the General Superintendent of the Delaware and Hudson Canal Company's mines, died of the injuries he sustained in the explosion of firedamp at the Eddy Creek mine in Olyphant. The following account of the accident was published in *The New-York Times* of September 15, 1889:

"A BRAVE MAN'S DEATH. / THE THRILLING EXPERIENCE OF ANDREW B. NICOLL. / Scranton, Penn., Sept. 14.—Andrew B. Nicoll, the General Superintendent of the Delaware and Hudson Canal Company' mines in this region, died this morning [September 14], after the most intense suffering, of the injuries he sustained in the explosion of firedamp at the

Eddy Creek mine Olyphant three weeks ago [August 22, 1889]. Nicoll is the fourth victim of that terrible disaster which set fire to the mine [John W. Jones, mine foreman, died of his injuries August 26<sup>th</sup>; Robert Mason, mine foreman, died August 31<sup>st</sup>; Samuel Williams, driver boss, died September 9<sup>th</sup>]. A braver man never faced death in a colliery. With four of his men he entered the Eddy Creek shaft to look for gas, and after making a tour of investigation one of the party, a man named Mason, called Mr. Nicoll's attention to a wall built across of the cross-cut, which he said was white before the fall of the roof and was now black. Never suspecting danger, the men held up their lights as high as their heads for a better look at the blackened wall, and in an instant there was a terrific explosion, which shook the mine and struck terror to their souls. / Mr. Nicoll and his companions were now in darkness, a mile and a quarter from the foot of the shaft, and they realized that they were terribly burned by the deadly flash. Knowing that relief from the outside could not reach them if they staid [sic] there, the heroic Superintendent rallied his comrades to make one supreme effort for life. Their clothing had been set on fire and was still burning about their limbs. Mr. Nicoll with his own hands rubbed the smoldering garments until he extinguished the fire, and burned every particle of skin from his hands in doing so. When he could endure the agony no longer he tore the burning clothing off with his teeth, severely injuring his mouth and face in the attempt. Then came the desperate walk in the dark of a mile and a half to the foot of the shaft. The Superintendent led the party, and guided their progress by feeling the rail in the little mine road along which they crept. One of the men begged that he might be permitted to remain and die, but Nicoll dragged him along by the collar until all finally, after a terrible struggle, reached the foot of the shaft, from which they were speedily hoisted to the air and sunlight. /Since the accident four of the party have died of their injuries. Mr. Nicoll being the fourth. He was born in Scotland in 1849, and was a man of great courage and perseverance. He worked his way up from a humble position until he became General Superintendent of all the Delaware and Hudson mines. He was familiar with disaster, and never shrank from danger in leading relief parties down in the depths to try to save some poor miner whose life was threatened by falling roof or firedamp." (The New-York Times, September 15, 1889)

With the Eddy Creek mine on fire, the Eddy Creek was turned into the shaft by way of the water course in No. 2 in an effort to put out the fire. In addition two pumps were placed by the side of the Lackawanna River, from where water was also pumped into the Eddy Creek shaft to put out the fire. In the *Carbondale Leader* of September 23, 1889, we read:

"THE FLOODED MINES. / The latest concerning Shaft No. 2 and Eddy Creek Colliery. / Concerning the flooding of No. 2 and Eddy Creek shafts of the Delaware and Hudson Canal Company, in Olyphant, The Gazette of that place says: The pumps at the bottom of the shaft were all taken out and the Eddy creek was turned into the shaft by the way of the water course in No. 2. There are also two pumps to be placed by the side of the Lackawanna river, from where water will be pumped into the Eddy Creek shaft. / The filling up of the shafts will occupy at least

six weeks' time, and the amount of time it will take to quench the fire and dry up the workings again no one can tell. Some say that it will take one year, others say more than that, while we have heard the officials of the company maintain that both shafts will be in full operation inside of six months. How near either will come to the mark time alone will determine. In the meantime the men who have been engaged at both places are hustling around to other quarters. Large numbers of them are already engaged in the workings in and around Olyphant, while others have gone to Dunmore, Avoca, Carbondale, Jermyn, Archbald, Winton and in fact to nearly all the mines within a radius of twenty-five miles. / And now fears are entertained that a fall is shaping at the Grassy. The officials at the Grassy are very reticent as to what will be the outcome, in fact, claim there is not much to be feared, but there is no question but what a fall is threatened, and at present precautions are being taken to prevent it. It is rumored that in case No. 2 and Eddy Creek shafts are filled with water, as they undoubtedly will be, it is feared that Jermyn's shaft at Priceburg will also be compelled to suspend, owing to the working out of coal in proximity to the above named mines, and fear of the bursting of pillars between." (Carbondale Leader, September 23, 1889, p. 4)

Thirteen thousand gallons of water per minute were dumped into Number 2 shaft at Olyphant in an effort to put out the fire in the mine. In the *Carbondale Leader* of September 28, 1889, p. 3, we read:

"FLOODING THE BURNING MINE. /Thirteen Thousand Gallons a Minute Pouring In. / Standing on the edge of Number 2 shaft at Olyphant, peering into the impenetrable darkness beneath and listening to the rushing waters that fling themselves at the rate of thirteen thousand gallons per minute, with a mighty roar into the abyss, which descends to a perpendicular depth of 402 feet, one becomes fully impressed with the magnitude of the task undertaken by the Delaware and Hudson Canal Company in its determination to extinguish the fire that has been raging for several days in the distant chambers of the mine [emphasis added], says The Scranton Truth. The volume of water which has thus been turned into the shaft by a skillful stroke of engineering is drawn from Eddy Creek and the Lackawanna River. How long this task will take cannot be determined by anything like a reasonable attempt at accuracy. / The fire is burning in a fall of about thirty acres and at distance of 4,200 feet from the mouth of the shaft in a direct line. There are at least four hundred acres in the excavation averaging six feet in height and this will give some idea of the great volume of water needed to thoroughly flood the mine. The point in which the fire has gained headway is about 93 feet higher than the foot of the shaft into which the water is poured, and a water indicator placed in No. 2 shaft will show, by comparison with the surveys, when to turn off the torrent that is now rushing in there. At present interest centers in the work of flooding the colliery and the manner in which it is done. The water from Eddy Creek is diverted into the shaft through a water-box two feet high by three feet wide. Through this water-way the current receives 10,000 gallons a minute, and 3,000 gallons additional are drawn

from the Lackawanna river by means of four pipes, each 250 feet in length. Through these pipes the water is pumped with considerable force up a steep incline into a staunch wooden water course 600 feet long, 22 inches wide, 14 inches deep and sloping towards the shaft. / Up to last Saturday workmen were lowered down the shaft into which the water is rushing, but at present it is not considered safe to do so. They say the fall of water is awe-inspiring as it tumbles white and foaming with a deafening sound into the depth below, and their description is vividly verified by the roar that rises like the sound of a cataract from the mouth of the shaft in which the commotion is now going on day and night. / On the 22d of August the fatal explosion occurred from which four brave men have since died, as follows: John W. Jones, mine foreman, died of his injuries August 26th; Robert Mason, mine foreman, died August 31st; Samuel Williams, driver boss, died September 9<sup>th</sup>, and A. B. Nicol, mine superintendent, died September 14<sup>th</sup>. / Although the portion of the mine in which the fire is burning is comprehended within the borough of Olyphant, there are no buildings on the surface nor within a considerable distance of it. Nothing on the surface indicates the presence of the subterranean fire four hundred feet beneath, which burns with such desperate intensity and which has brought a valuable industry to a standstill at a great loss to the company and to the Olyphant community." (Carbondale Leader, September 28, 1889, p. 3)

By June of 1890, the fire in Eddy Creek shaft and No. 2 mine at Olyphant was put out and the work of getting the water out of the mines there was nearly finished. It was thought at first that only a few months would be necessary to flood and empty the mines, but now the greater part of a year has passed and the water is not all out yet. In the *Carbondale Leader* of June 3, 1890, we read:

"OLYPHANT'S FLOODED SHAFT. /The work of Removing the Water nearly Finished. / The work of getting the water out of Eddy Creek shaft and No. 2 mine at Olyphant is slowly progressing. It is over nine months since the frightful explosion of gas occurred which fatally injured Andrew Nicol and three other men, and neither of these mines have been operated since. It was thought at first that only a few months would be necessary to flood and empty the mines, but now the greater part of a year has passed and the water is not all out yet. For the past few weeks the work has been going on very slowly, the water being reduced about four inches every twenty-four hours. This can be accounted for by the fact that no pumps are being used in Eddy Creek shaft to assist the work in No. 2. There both plungers and buckets are operated to remove the water which is yet 17 feet deep. The water has been taken from the foot of Eddy Creek shaft, but there is a considerable amount yet in the lower part of the shaft near No. 2. Two pumps are being put in Eddy Creek, which will take the water from the slope and convey it to the tank at the foot of the shaft. The tank will be elevated about four feet from the bottom of the shaft and will be emptied by means of two buckets which alternately are raised and lowered into the shaft, one being emptied at the top while the other is being filled at the tank. Each bucket will hold 1,000

gallons and can be operated at the rate of one a minute. / At No. 2 shaft they are making preparations to put in a seventeen-foot fan to ventilate the workings. In Eddy Creek the roads are being cleaned and are in better condition than was expected. There is much mine gas, but Andrew P. Patton and his assistants, who are at work inside, are careful and no fear need be had of an explosion. The plunger in No. 2 shaft will start in a few days and the work will progress more rapidly than it has been. While hoisting at this shaft last evening at about 6 o'clock one of the ropes broke and the carriage to which it was attached and the tank crashed to the bottom. No one was injured, but the work of hoisting the water, was stopped. The carriage and the tank were badly smashed. A new carriage was put on this morning, a tank was built and the hoisting resumed this afternoon.-- Scranton Truth." (Carbondale Leader, June 3, 1890, p. 3)

In July 1892, it was discovered that a large body of coal was on fire in Old No. 1 Shaft in Carbondale and that the fire was working back through the old colliery known as No. 1 very rapidly. The Columbia and the Mitchells promptly responded and soon two streams of water were playing on the wall of fire. Four of the firemen and a number of Delaware & Hudson employes pumped water on the fire throughout the night and by the following morning the fire was well under control, with no further danger anticipated. The mine in question was one of the first openings made by the Delaware & Hudson Canal company and was the one abandoned after the great cave-in that occurred in 1846, when fifteen of the entombed miners met their death. Here is the account of this fire in a mine that was published in the Carbondale Leader of July 22, 1892:

"A MINE ON FIRE. / The Old No. 1 Shaft Discovered All Ablaze--The Danger Over / For a week or more perhaps the residents of that portion of Pike street near Sand street have noticed smoke issuing from the ground in the neighborhood of their homes, and while the smoke was a trifle misty and only seen occasionally it excited the curiosity of these people, and though they did nothing else, they did a great deal of talking about the evidence of a fire in the earth. / A peculiar odor was discovered in the cellars of the houses and in one or two instances the lamps carried into the underground apartments would suddenly be extinguished. Nothing was thought of these singular occurrences and no one sought to look up the cause until yesterday when smoke in great volumes poured from the old mine opening on the south bank of the Lackawanna river a short distance south of the gas house. / Foreman John Waterfield and Morgan Thomas entered the old workings yesterday afternoon and discovered that a large body of coal was on fire and that the fire was working back through the old colliery known as No. 1 very rapidly. These men hastened to the surface to procure help and a general fire alarm was sounded from engine house No. 28. / Columbia and Mitchells promptly responded and soon had two streams of water playing on the wall of fire. Fortunately the air current was inward and the men who held the nozzle were able to make their way over the 'fall' [from 1846] that almost blocks up the entrance to the old mine. Four of the firemen and a number of Delaware & Hudson employes were kept

busy all night and this morning the fire was well under control and no further danger is anticipated. / The origin of the fire is one of the mysteries that cannot be cleared up at present. It is supposed that the fire was started by the boys who find these old underground places a convenient place to keep house. / The mine is one of the first openings made by the Delaware & Hudson Canal company and was the one abandoned after the great cave-in that occurred in 1846, when fifteen of the entombed miners met their death." (*Carbondale Leader*, July 22, 1892, p. 4)

Three days later, July 25, 1892, the fire still burned at Delaware & Hudson Colliery No. 2. Efforts continued to put out the fire. In the *Carbondale Leader* of July 25, 1892, we read:

"STILL BURNING. / The Mine Fire Defies All Attempts to Extinguish It. / The fire in the old colliery continues to rage despite the efforts put forth to extinguish the internal blaze. A large force of men have been busily engaged fighting the flames and removing the debris ever since the fire was discovered. As fast as they surround one burning pillar another mass of burning coal is brought to view. / Last night the workmen had reached a point fully three hundred feet from the opening and the men in charge of the work were inclined to believe that they had succeeded in drowning the fire but they changed their mind when one of the prospectors who had been sent forward returned and reported a large body of fire on the south side of the mass of coal upon which two streams of water had been poured for the past two days. / This morning an opening was made through the 'fall' and an additional stream of water is now being thrown directly upon the burning coal. It is impossible to determine at present the course taken by the fire, as the caveins have created air passages in every direction but it is believed that the flames are making their way through the abandoned mines. To cut off the fire from the present workings is the first thing to be done and in doing that it is thought a point can be reached where the mass of fire can be completely surrounded. / If the surface indications can be relied upon the fire has reached a point several hundred feet in advance of the place where the men are now at work and the steam from the burning mass, aiding combustion hastens the progress of the flames. Smoke can be plainly seen rising from the surface fully one hundred feet south of Pike street and the residents of that locality are much concerned. / Little can be gleaned from the men engaged fighting the fire for they have been disappointed so many times that they do not care to venture even a conditional prediction. There is entirely to [sic] much uncertainty about hidden fires and the men who are doing the underground work realize that this fire is far more serious than they at any time thought it was, the air currents are all carried inward and forming a draught, there is no telling where or how soon it may end." (Carbondale Leader, July 25, 1892, p. 3)

In the *Carbondale Leader* of September 9, 1892, it was announced that the fire in Delaware & Hudson Colliery No. 2 had been finally extinguished:

"NO MORE DANGER. / The Mine Fire is Now Said to be Surely Extinguished. / It is now pretty definitely settled that the fire in the old workings known as Delaware & Hudson colliery No. 2 has been extinguished, and that the danger threatened for more than two months to adjoining collieries is now over. The water poured into the crevice in the rocks west of Pike street is believed to have done the work effectually. / When the great body of fire was found to be in the river vein a tunnel was opened in that vein of coal and driven for a distance of 150 feet in a course that would cut off the burning mass from the other veins. This week the men working in the tunnel reached the burned section and found that the flooding experiment had proved a success. It was impossible to extend the opening farther, as nothing but the ashes was left and this could not be removed with any degree of safety. A thorough investigation was made and the mine superintendent was satisfied that there was no further damage from fire in that quarter. Three shifts had been employed in the tunnel and the work had been prosecuted vigorously night and day from the time the work was commenced. / This opening proved that the course of the fire had been correctly determined, and while the tunnel was not utilized as a waterway, it provided the only was possible by which the information sought could be obtained, and now he company officials are reasonably sure that the coal deposit in the collieries now being worked have been saved from the fire that threatened to destroy it." (Carbondale Leader, September 9, 1892, p. 4)

1720

# **Company Towns**

Company towns, sometimes called "patches", were found throughout the anthracite region. Many of these patches had an identifiable ethnic character.

Patch towns came into existence, more often than not, when the coal basins were small and scattered, as in the Lehigh and Schuylkill fields, and the collieries were isolated, physically, from the major towns. That being the case, the coal companies operating in those fields established patch towns to attract and house miners and laborers. Patch towns originally consisted of company housing and a store adjacent to a colliery, and existed solely to produce coal for export.

In the Lackawanna and Wyoming Valleys in the Northern coal field, there were fewer patch towns than in the Lehigh and Schuylkill fields because most of the collieries in the Northern coal field were located in those two valleys and were in close proximity to existing towns in those valleys, in which was located a virtually unbroken series of non-company towns that were connected by the railroads.

In the Northern coal field, nevertheless, there were some patches/company towns, including Edgerton, Jonesville, Pancoast, Priceville, and Underwood. Some of the patches in Scranton, we learn from *Petula* (p. 109) were Sloan's Patch (Hyde Park), Bloom's Patch (Providence), Carr's Patch (South Side), Davis Patch (South Side), Johnson's Patch, Brezman's Patch, 'Hunky' Patch and numerous others.

Miller and Sharpless give a very good description of patch communities and life therein in Kingdom of Coal, pp. 142-143, as follows:

"Coal companies owned isolated patch communities outright, and consequently dominated the lives of the patch inhabitants. The company dictated laws, hired company police, and owned all land, streets, houses, stores, schools, churches, and community buildings. Early patch towns were usually characterized by a row of shacks and houses along a single, narrow road. Over time, additional streets were laid out as necessary. Mine bosses and supervisors lived in larger homes, often located on the high ground of the community. Miners' houses, usually constructed as duplexes, were located downhill from supervisor housing. Laborers and other unskilled workers often lived in shacks at the base of the main street or on side streets and alleys. A company store and community center, which often served as a school, were situated in the center of the hamlet. The company store served an integral role in the patch town. It was usually the only place where food, tools, and dry goods could be purchased. The local coal company extended credit to miners and then deducted the amount due, plus rent, from their paychecks. Prices at the company store were often artificially high and miners were expected to trade there. If the patch was large enough, a Presbyterian church might be located near the bosses and supervisors' housing, while a Catholic church sat at the workers' end of the village. The colliery's coal breaker, railroad tracks, mule yard, and machine shops stood adjacent to the residential hamlet."

Residents of these patch towns regularly walked into nearby towns. In *Kingdom of Coal* (pp. 142-143), we read:

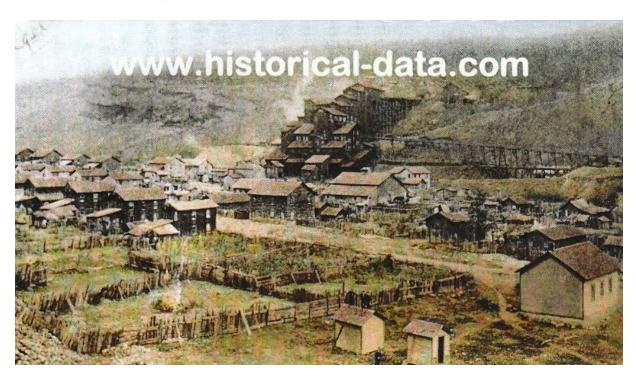
"In many cases, patch residents walked to nearby towns to attend church, shop elsewhere than at the company store, visit taverns (often run by widows of miners), post offices, or railroad depots. Ethnic mutual aid and beneficiary societies were usually headquartered in these larger communities. As with churches, benefit and fraternal institutions helped newcomers find employment, housing, and prepare for citizenship. Once newcomers were established in a mining community, the societies also served to take care of widows and orphans, the ill and inform, and provided social and economic insurance within different ethnic groups." (Miller and Sharpless, *Kingdom of Coal*, pp. 142-43)

Edgerton was a patch town.

Here is the only photograph of the village of Edgerton and the coal operations there that is known to exist:



Dale E. Keklock, Archbald, has a special interest in Edgerton, and has had colorized the photograph shown above of Edgerton. That colorized photograph is now serving as Dale Keklock's business card, which is shown below.



Edgerton, east of Mayfield

## Early History of Edgerton:

Under the authority given The Jefferson Railroad Company to build branches, a branch was built to develop the coal lands of Hosie and Park under an agreement with them dated May 28, 1883—portions of the right of way being granted by the Delaware &Hudson Canal Company and by the Northern Coal and Iron Company (see agreements dated April 1, 1884). This branch extended from a point on the Delaware & Hudson Canal Company's Railroad about two miles south of Carbondale to the Edgerton Coal Mines, about  $2\frac{1}{2}$  miles. It was known as the Edgerton Branch of the Jefferson Railroad [emphasis added], but did not touch that road. It was built in 1884 upon a right of way conveyed to The Jefferson Railroad Company.

In 1889, Edgerton was identified as "probably the banner prohibition town in the state [of Pennsylvania]". In a newspaper clipping in a Gritman scrapbook dated Friday, June 21, 1889, clipping probably from the *Leader*, we read:

"The Banner Town. / Probably the banner prohibition town in the state is the little village of Edgerton, near Jermyn. Out of 30 votes cast on Tuesday every one was for the Amendment. Where is there another mining town in the country that will show such unanimity of temperance sentiment?"

On September 26, 1892, Peter Gilligan, who was employed at the Edgerton colliery, was struck by the north bound D&H train near Mayfield and instantly killed. Gilligan was a veteran of the Civil War, having served as a member of Company K, Ninth Regiment Pennsylvania Volunteers. In the *Carbondale Leader* of September 27, 1892, we read:

"KILLED ON THE TRACK. / Peter Galligan Struck by a Passenger Engine Last Night. / Peter Galligan, employed at the Edgerton colliery was struck by the north bound Delaware & Hudson passenger train last night, and instantly killed. A few moments before the train was due at Mayfield switch, Mr. Galligan came along the track and stopped to talk with an acquaintance. He was on his way home and was in the habit of walking along the railroad track because the distance was shorter and the walking much better than on the wagon road. / His body was brought to this city on a late train and taken to McHale's undertaking rooms on Salem avenue. It was evident from the nature of the wounds that he was struck by the frame of the locomotive as the fatal injuries were confined to his head, the back of the head and right side of his face being crushed, but when prepared for burial by Undertaker McHale there was little to be seen that would indicate the manner by which the unfortunate man met his death. / Mr. Galligan was a veteran of the Civil war having served as a member of Company K, Ninth regiment Pennsylvania volunteers. He is said to have been born in this city. After the war he located in Pittston where he lived with an aunt who is the only known relative in this locality. He was about fifty-five years old and was unmarried. His acquaintances at Edgerton speak in highest terms of him. Notice of funeral will appear tomorrow." (Carbondale Leader, September 27, 1892, p. 4)

"A FALL OF COAL. / Completely Covered a Laborer in the Edgerton Mine. / MAYFIELD, May 17. / Quite a serious accident occurred at the Edgerton colliery yesterday afternoon. Tommy Rotell, an Italian, who is laborer for Thomas Caffery of Edgerton, while loading a car was caught by a fall of top coal. The large mass of coal completely covered him and it required some time to remove it and get him out. He was seriously injured, but that he escaped instant death was remarkable. Dr. Shields attended the injured man, whose face and head were badly cut. It required twenty-five stitches to bring the lacerated parts together. He will probably recover. The car broke the force of the fall and made it possible for him to be carried to his home alive." (Carbondale Leader, May 17, 1899, p. 2)

On October 6, 1899, Mike Callender and John Papovish were instantly killed by a fall of top coal at the "Last Chance" or Edgerton mine. Here are the details on this unfortunate accident:

"TWO KILLED IN THE MINES. / Workmen Instantly Killed at "Last Chance" Mine Yesterday Morning By Falling Coal. / Mike Callender and John Papovish were instantly killed at the 'Last Chance" or Edgerton mine yesterday forenoon by a fall of top coal. They fired a shot that dislodged two props leading to the fatal result. / The coal about them started to fall and while endeavoring to save their tools they were caught by the falling top coal which was about ten feet thick. Papovish's body was found at 7 o'clock last night and Callender's body was not recovered until 2 o'clock this morning. The delay in finding the bodies was caused by the top rock continually falling. Papovish leaves a wife. The other man was not married." (Carbondale Leader, October 7, 1899, p. 5)

From an undated clipping from a Scranton newspaper in the collection of the Carbondale Historical Society, we learn the following facts about Edgerton:

- At Edgerton, there was a rich vein of anthracite coal, eighteen to twenty feet thick, with an outcropping in forest land, making it one of the largest in this part of the anthracite field
- Edgerton was developed by Simpson & Watkins, largest independent operators of the
  anthracite industry, with mines in Lackawanna and Luzerne counties. One of its
  operations was the Devil's Eyebrow mine southeast of the Hudson Coal Company's
  Powderly colliery, Carbondale. From the Devil's Eyebrow the Clark vein extended for
  miles in the southeast where it cropped to the surface. Engineers determined the depth of
  the vein at from eighteen to twenty feet.

- Simpson & Watkins had a slope built into the vein and erected a breaker in about 1883 or 1884. In 1904, when the breaker was torn down by the Temple Coal Company, successor to Simpson & Watkins, Edgerton was a deserted village with houses crumbling.
- Between 200 and 300 families, all dependent on the Edgerton slope and breaker for a living, resided at Edgerton.

Here is the complete text on that clipping:

"Edgerton, Formerly Prosperous Mining Town In Midvalley, No longer Exists / Memories of old-timers will undoubtedly be stirred by this picture of the old Edgerton, a mine settlement east of Mayfield, which developed along the same pattern as early boom towns in the west and which, like many of those same boom communities, became a ghost town when the mineral under the earth's surface was exhausted. In the west it was gold that brought boom towns: in Edgerton it was coal—a rich vein that ran from eighteen to twenty feet in thickness with an outcropping in the forest land, which became the site of the bustling, thriving town of Edgerton back in the [18]80s. Here and there a part of stone foundations alone mark the site of Edgerton today. / Edgerton was developed by Simpson & Watkins, largest independent operators of the anthracite industry, with mines in Lackawanna and Luzerne counties. One of its operations was the Devil's Eyebrow mine [emphasis added] southeast of the Hudson Coal Company's Powderly colliery, Carbondale. From the Devil's Eyebrow the Clark vein extended for miles in the southeast where it cropped to the surface. Engineers determined the depth of the vein at from eighteen to twenty feet, making it one of the largest in this part of the anthracite field [emphasis added]. Engineers also reported that in the area where the vein extended to the surface the coal extended back for some distance. Simpson & Watkins had a slope built into the vein and erected a breaker in about 1883 or 1884. When the slope and breaker were opened, buildings which had been built in a great hurry housed somewheres [sic] between 200 and 300 families, all dependent on the Edgerton slope and breaker for a living. / A store was opened, a schoolhouse built, taverns were erected in a hurry and Edgerton stepped out as one of the liveliest and most prosperous communities in the hard coal belt. / When the Clark vein was mined out, operations ceased and people began moving to other parts of the county. In 1904, when the breaker was torn down by the Temple Coal Company, successor to Simpson & Watkins, Edgerton was a deserted village with houses crumbling. / For some years only the huge culm pile remained to mark it as the site of a mining town, and in 1921 even this landmark disappeared through the sale of culm. / The picture produced by The Times today was loaned by Norman R. Brown, vice president of the Edison Coal Company and secretary-treasurer of the Temple Coal Company, now a holding company which has leased out its coal tracts to independents. Mr. Brown is the only present employe of the Temple company who was with it at the time of its organization." (undated clipping from a Scranton newspaper in the collection of the Carbondale Historical Society)

A substantial body of information on Edgerton is presented in Volume XI in this D&H series in Section 1113 (pp. 261-87); also in Volume XVIII in this series (see Edgerton Colliery).

#### Jonesville

Jonesville was a mining village ten miles south of Carbondale, between Archbald and Olyphant. The only reference we have ever seen to Jonesville is in the notice given below from the May 7, 1859 issue of the *Carbondale Advance*:

"Jonesville. / The first coal laden train of cars from Jonesville—the new Mining village 10 miles below us—arrived in town on Thursday, passing successfully over the new extension of the Railroad, showing that it is in good order. The Shutes for loading cars are not yet quite completed, either at that point, or at Eaton & Co.'s works, Archbald. Hence a few days must yet elapse before much coal can be forwarded from below. / Considerable quantities are daily forwarded from the mines at this place. / Surveys are now being made by the Company, preparatory to the extension of their Railroad several miles further down the Valley." (Carbondale Advance, May 7, 1859, p. 2)

#### **Pancoast**

Pancoast, "another new mining village," started into life in the Spring of 1882. It's location: "a little south of Dickson City, and of Jermyn's new coal works at Priceville." The following announcement of the birth of Pancoast was published in the *Carbondale Advance* of January 14, 1882:

**"Pancoast.** / Another new mining village is to start into life, under the above name, the coming spring, a little south of Dickson City, and of Jermyn's new coal works at Priceville. It will be upon lands owned by Price & Pancoast, and the coal there will be mined by Messrs. C. M. Sanderson and C. D. Simpson. The lease for the coal was signed in March last, and it is claimed that in quality it is not surpassed in the valley. A half million feet of lumber was used in the breaker." (*Carbondale Advance*, January 14, 1882, p. 3)

On April 7, 1911, a fire broke out in the Pancoast mine in Throop, and 73 people were killed. In the Sunday, July 20, 2008 issue of The *Scranton Sunday Times*, on page A6, which features news and historical items about the many communities in the Lackawanna Valley and nearby points, the feature story in the "Around the Towns" section is titled "PANCOAST MINE DISASTER."

At the head of the story is a photograph of the PHMC roadside marker that was installed in front of the Throop Borough Building, Charles Street and Sanderson Avenue, in 1947 and dedicated on October 23, 1947. The text on the marker reads as follows:

"ANTHRACITE MINE DISASTER. / On the morning of April 7, 1911, the nearby Pancoast mine here in Throop was the scene of a disastrous fire. Seventy-two miners died by suffocation, and a government rescue worker also was killed. This tragedy soon led to the enactment, on June 15, of state legislation requiring that all interior buildings at coal mines be constructed of incombustible materials."

An excerpt from a report on the disaster that was published in the *Scranton Tribune-Republican* on Saturday, April 8, 1911, is given with the story. Here is that excerpt:

"All of the 21 bodies recovered up to midnight were found in groups of threes and fives, all lying face down in the ditch alongside the track. Many of them had handkerchiefs pressed against their faces, showing how they fought to resist suffocation. / . . . No attempt was made to take the bodies from the mine in daylight. Carrying bodies from a mine in the face of a crowd of 5,000 people, among whom were wives and children of the dead, would not have served to quiet the thousands that crowded against the ropes. / Instead of bringing the bodies to the surface they were laid out in blankets at the foot of the shaft as fast as they were found. When night set in, when men could move about and their movements not be read except by the dim glare of mining lamps fastened to caps, the work of taking out the bodies was begun; a work that did not cease until the day again was beginning to break. / Up and down glided the carriage. Four little tingles of a bell was the signal for all that another body, maybe two or three, was to be hoisted from the mine. Clang, clang, clang, clang sounded the bell, then a mighty puff of the engine, a rumbling, roaring sound, the rattling of powerful steel ropes and another body was brought up, checked, identified, and the identity of the dead man whispered from ear to ear at the shaft's landing. / At 3:30 o'clock this morning, 35 bodies had been hoisted to the surface. The eight rescue crews at work in the mine had located 17 other bodies, and the officials fear that at least a dozen more men have lost their lives in the chambers and cross-cuts."

#### Underwood

The village of Underwood, which was established by the Pennsylvania Coal Company, was located near the Throop/Olyphant border, in the area between Mid-Valley Industrial Park and Mid-Valley High School.

The village of Underwood was named after Frederick D. Underwood, who was president of the Erie Railroad from May, 1901 to January, 1927. Here is a photograph of the man:



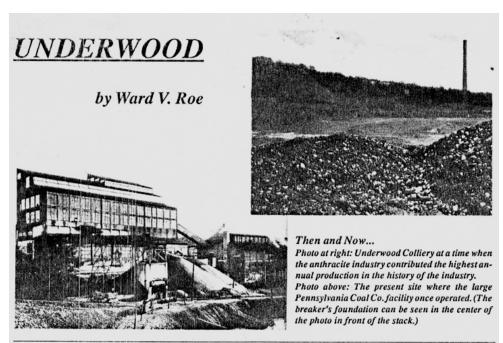
Frederick D. Underwood

In Edward Hungerford's *Men of Erie A Story of Human Effort* (Random House, 1946), p. 211, we read the following about Underwood:

"There was little that was drab or gray or monotonous in the twenty-six years that Frederick D. Underwood controlled the destinies of the Erie. He became one of the best-known railroad presidents in the United States. Possessed of an extraordinary amount of vision and a strong sense of publicity, as well as more than a good measure of common sense and railroad experience, he rose to the fore among his fellows."

Also in *Hungerford* (p. 224), we read: "Underwood in less than a quarter of a century had doubled the traffic of Erie, raising its haulage between 1901 and 1926 from 4,756,339,949 to 9,469,280,360 ton-miles—an increase of 99 per cent. Doubling the freight traffic raised its annual revenues from about \$40,700,000 to \$118,500,000, while at the same time operating costs had been cut more than 11 per cent by longer and better freight trains. Over \$174,000,000 had been spent in the permanent improvement of the property. East of Meadville, it had been almost completely rebuilt. With the exception of two not too difficult 'pusher grades,' it was almost a water-level line all of the 516 miles from Meadville to Jersey City."

A very good history of the village of Underwood, by Ward V. Roe, was published in The Lackawanna Historical Society Journal, Volume 22, No. 2, July 1990, pp. 4-6. Here is that article:



Above the trees near the Throop/Olyphant border, in the area between the present Midvalley Industrial Park and the Midvalley High School, rises the powerhouse stack of Underwood Colliery. The stack, a few foundations, and banks of culm or coal waste are the only physical remains of the Pennsylvania Coal Company's large facility constructed to support the mining of anthracite coal. Across the present roadbed sat the company housing associated with the colliery, Underwood Village. While life in this particular village was in many ways similar to that of other regional mining communities, there are aspects of Underwood's history which are quite unique.

The history of Under-

wood Village begins with the timely construction of the colliery at the base of the Moosic Mountain by the Pennsylvania Coal Company during the years between 1910 and 1914. The construction was completed just in time for the World War I coal boom, a time period which contributed the highest annual anthracite production records in the history of the industry. The building of this colliery was also timely in the sense that it followed the Great Strike of 1902 by at least few years, thus by the time Underwood began production in 1914, relations between labor and industry had at least stabilized. mineworkers were experiencing a rise in their standard of living, and the worst abuses by the

industry upon its labor force were in general, greatly diminished from years prior. In an era when demand was high, work was steady, and wages were at least fair, Underwood opened shop.

Underwood was one of the first "modern" collieries in the Lackawanna Field, replacing the fireprone timber construction with iron, steel, and poured concrete. It was named for F.D. Underwood, president of the Pennsylvania Coal Company from 1901 to 1913, and president of the Erie Railroad when the colliery was finally completed. The village itself, built in 1912, most likely was given its name by the coal company, but newspaper accounts of the closing in 1936 attribute the naming process to the hand-picked villagers themselves who

were "greatly impressed" by Mr. Underwood during his visit to the village shortly after construction was completed. While the village did not survive the Great Depression of the '30's, the colliery did, and remained viable until the closing in 1953. Many of the people who once lived at Underwood Village retained or regained employment at the colliery once the economy began to improve, and moved to the neighboring communities of Olyphant or Throop to establish new residence. In fact, once the villagers were given notice as to the fate of their housing at Underwood, these two communities virtually opened their arms in welcome. The then Burgess of Olyphant, John Kilcullen, sought funds from the Federal

Housing Administration to build homes for the former Underwood residents proclaiming, "We want them all here. We don't want them to scatter all around after they've lived together so many years. They're wonderful people. Never any trouble ever in Underwood."

The village was comprised of 23 modest company owned houses in which lived approximately 48 families. The total population of Underwood numbered around 250 persons. There were 18 double homes for the miners and their families, and 5 single dwellings for the company bosses. These were divided by a paved street with sidewalks, an unusual and progressive feature for a company village, which also served as the dividing line between the boroughs of Throop and Olyphant. The miners lived on the Olyphant side of the street, the officials in Throop. Other sidewalks led to the important community buildings and to the colliery, and roads connected the village to the outlying communities. Bus service ran to Throop where it met the rail line, allowing the Underwood residents to access the markets and shops in Scranton. Rent was set at six dollars for the half doubles, and fifteen dollars was paid to the company for the single dwellings. All homes were equipped with electric lighting, steam heat, running water, and an outdoor "privy." The electricity and steam heat were both manufactured at the colliery's power plants, and were furnished to the



A patch house today near the abandoned site similar to those of the Underwood Village.

residents of the village free of charge. Each house had enough yard to justify a small garden, and all had porches in the rear, popular among the residents for relaxation. Individual automobile garages were provides for the officials and a large, multi-bay garage at the end of the street was provided for the miners. The then popular Model-T was apparently making its debut among the working class.

Another unique innovation at Underwood was the construction of the first up-to-date wash house built in a company town solely for the convenience of the miners, and an additional bath house for the use of their wives and children. While some residents of the village preferred the standard "Saturday night bath" in

a tub at home, the presence of these conveniences in a patch town may be seen as a striking innovation, breaking conventional practice by the coal companies in regard to the health, sanitation, and welfare of its employees and their families. Along these same lines, and central to the social and moral life of the village, a large community center was built consisting of a modern schoolhouse which also served as a house of worship; and the community building itself, the hub of social activity. The school was ungraded and students at all levels were mixed in the class-Instruction was room. relegated to the basics of reading, writing, penmanship, spelling, grammar, mathematics, and some basic vocational training.

The teachers were usually imported from Olyphant or Throop, and in the case of inclement weather an official from the colliery would be sent to drive the teacher to the school. On Sundays, the school served as the village church with services conducted by visiting ministers of various denominations on a rotating basis. The adults of the community taught Sunday school to the children.

The community center served as a meeting hall for the miners and as a social hall for dances and parties held by the residents. One former resident of Underwood recollected attending a large venison roast dinner here, which took place following a successful hunt by some of the miners. Around this building a

number of recreational facilities were built; including a ballfield, tennis court, and shooting range.

One feature common to company villages in the coal fields that was not present at Underwood was a company store. Prior to the 1902 strike, company stores often would extend credit to the miners and their families for food, dry goods, and mining supplies, often at inflated prices. The balance due would then be deducted, along with money for rent on the company house from the pay envelopes at the end of the week, often leaving the miner with little or nothing left for his family. At some company villages, the mine operators would even require the miners to buy all their goods from the company store or face termination of employment or eviction from their homes. It was not at all uncommen under these conditions, that a miner might work all week and on payday he would owe the company. Thus, the questionable practices of the company stores brought them under the scrutiny of the United Mine Workers Union, and later into the public concern during the federal investigation conducted by the Theodore Roosevelt administration in an attempt to settle the anthracite strike of 1902. Since the Pennsylvania Coal Company had made great strides in rectifying some of the problems inherent to company owned villages with the construction of "model" Underwood, it would then seem logical that they would avoid the problems connected with company stores altogether by simply not having one. Besides, Underwood was located in an area where the markets and stores in nearby Olyphant and

Throop could be easily accessed by the village residents, both on foot or by car, unlike some of the other more isolated patches in the region.

There is evidence, however, that at one time there was a small store opened at Underwood, possibly to alleviate some hardship on the part of the villagers. A former resident of Underwood now living in Stroudsburg, Pennsylvania, Mrs. Arlene Fritz, recalls that this store operated for a period of time during the 1930's and would extend credit to residents during periods of unemployment. Her recollections of life at Underwood during the Great Depression offers some insight into the sentiment of the village population regarding the coal company, employment at the colliery, housing conditions, and the closing of the village in 1936.

Mrs. Fritz, a native of Jessup whose father worked in one of the local mines there. moved to Underwood in the early '30's when her husband became employed as an electrician at the colliery. She indicates that they were very happy to be moving into Underwood Village, both because the job offered a degree of stability for their family in a time of economic hardship, and also that the village itself was simply thought of as a nice place to live. She uses the term "family" to describe the relationships between villagers, and notes a strong kinship among those who lived there. Even during the depression, the general sentiment of Underwood's residents remained quite good; and although work was not always steady, there was enough to support those who lived in the village.

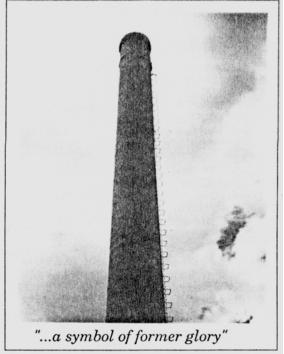
Her first son was born at

Underwood, attended by Dr. Lyons of Jessup. This was necessary because Underwood did not employ a company doctor. She recalls that while she was pregnant with her first child, there were at least nine other women at Underwood in the same condition.

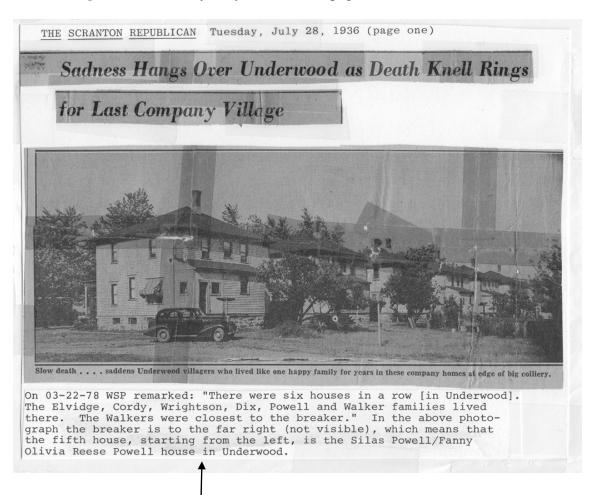
Unfortunately, the optimism of Underwood's residents could not save the village from its inevitable fate, and in 1936 the Pennsylvania Coal Company served one year eviction notices to every family. Mrs. Fritz recalls a general feeling of despair experienced by the village community. By the following year, most of the residents had relocated to nearby communities including Jessup, Olyphant, Throop, and Peckville, with the men retaining their employment of the colliery. However, the close-knit community that once existed in

the village was never regained; and as the anthracite industry declined through the years, these families scattered far ther and farther apart. The Fritz family eventually moved to the Stroudsburg area and established a business there once employment at the colliery for Mr. Fritz became erratic.

The colliery, however, continued to produce "Jet-Black" anthracite until February 28, 1953, when the company finally shut down its operation with a lay-off of approximately 300 workers. Today, the towering stack serves as a symbol of former glory, and continues to stimulate fond memories of Underwood Village in the hearts of some of its former residents.



In 1936, when the village of Underwood was closed, the following article was published in *The Scranton Republican*, Tuesday, July 28, 1936, on page 1:



"WSP" at the head of the above note on this caption was the author's father, Walter Silas Powell, who was the son of Silas Powell and Fanny Olivia Reese Powell, who lived in Underwood.





The two photographs reproduced on this page are part of the article that begins on the preceding page--an article which appeared in <a href="https://doi.org/10.1001/journal.com/">The Scranton Republican on Tuesday, July 28, 1936 (page one)</a>.

The text of the article that accompanies these three photographs is given on the following three pages.

The following article was published in <a href="The Scranton Republican">The Scranton Republican</a> of Tuesday, July 28, 1936 (pp. 1, 11):

SADNESS HANGS OVER UNDERWOOD AS DEATH KNELL RINGS FOR LAST COMPANY VILLAGE

UNDERWOOD HOUSEWIVES SAD AS VILLAGE IS DOOMED TO DIE

Must Leave Houses They Called "Home" for 20 Years, As Coal Firm Orders Death of Last Company Settlement Here

Tears dimmed the eyes of mothers and housewives yesterday as they gathered in the little village of Underwood, nestling down in the valley under the shadow of Moosic Mountain.

A sudden bolt had struck the village, something they never expected would happen. For years the 48 families living in the 23 company-owned houses had realized the danger of mine caves, but the bolt that struck was one that never entered their thoughts.

The Pittston Company, which had been like a kindly father during their years of tenancy, had or-

dered some of the families to move.

Dust from the towering silt and refuse banks of Underwood Colliery had settled on the houses, until the bright paint lost its luster. And all around the Scranton district the company villages that dotted the valley had been slowly evacuated with the passing years, until the little village of Underwood was the last one left in the Scranton area.

But even that did not infuse into their thoughts a realization that some day they would have to move,

too.

But it was not all sadness that pervaded the village yesterday, despite the fact that the older residents were sad.

The children were joyous at the news they were finally going to move. And they made no secret of

their delight.

The word that the last of the company villages in the Scranton district was to be evacuated came through the mails to some of the residents on Friday. The notices told them to move by September 1 if possible and by October 1 at the latest.

There are several reasons behind the evacuations, as explained by H. J. Connolly, vice-president in charge of operations of the Pittston Company.

The little village has served its purpose. It was originally built about 23 years ago when transportation was less rapid and it was necessary to have key workers close at hand. The automobile has changed that.

Then there has been a growing need for a refuse dump and silt bank, which now towers almost in the backyards of some of the homes.

#### Fear Mine Caves

The third reason for the company's move was an important one, the miners are working in a vein of coal under the properties.

But all the logic behind the reasons did not ease the heartache for some of the old residents yesterday.

"It's like trying to tear up and transplant an old tree," said Mrs. William Dick, wife of the chief engineer at Underwood Colliery.

Seated on the porch of the home, where she has lived for more than 22 years, Mrs. Dick looked around at the hollyhocks, the barberry hedge, the rose bushes and the ferns she had planted there. The large green house is shaded by trees that grew up during the years she and her husband lived there. They were originally planted by the company.

"My husband hoisted the first car of coal taken out of Underwood Colliery," she continued. "Three of my five children were born in this house. Of course, we haven't had our notice yet, but I suppose in time we'll have to move."

In another house just across the street, Mrs. Henry Coates, wife of the assistant foreman, sadly continued her work as she talked.

#### Praises Company for Aid

"It's just terrible," she said, "We've lived here 22 years. We've put a lot of things in. We thought we'd be here as long as time, as they say. But I guess this year will be our last. We were told Friday to move at least by October lst.

"I suppose we'll go to Throop, but it will be hard and much more expensive. The company has been wonderful to all of us. We had free lights, free garage, and all the water we wanted for the house. If we wanted anything fixed, all we ever had to do was to ask and they'd fix it.

In the Spring of 1985, Barbara Wroblewski (118 Hull Avenue, Olyphant) told S. R. Powell (the present author) that George Hyduk (845 East Spruce Street, Olyphant) had done many paintings of the village of Underwood.

On July 29, 1936, the following article about Underwood was published in *The Scranton* Republican:

THE SCRANTON REPUBLICAN Wednesday, July 29, 1936 (page 16)

# Old Timers Swap Tales of Early History As Underwood Marches Toward Its Doom

### Stories Depict Village's Birth, Distinguished Career

The village of Underwood has had its day, and a little town which had a glorious history will soon be just another "Deserted Village"—left behind in the on-

ward march of time and progress.

The death knell has been anded for the little community by the edict of the Pittston Com-pany that it must be evacuated gradually, it was disclosed Mon-day. Three families will move out this week, their nomes will be boarded up as two houses already have been closed forever.

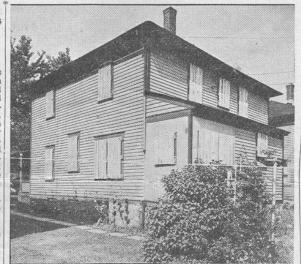
Other residents have been ordered to move by October 1 at the latest.

And so in the dring community, the old residents swapped tales yesterday of their town which had a glorified birth and a distinguished youthful career.

Life in this wooded section began in 1912, when the Pennsylvania Coal Company built the first model coal colliery on a clearing in the valley at the foot clearing in the valley at the foot of the Moosic Mountain. Part of the village was in Olyphant and part in Throop. The dividing line ran right down the center of the main street (which, by the way, was paved), and the miners and their families resided in Olyphant, while the officials of the control of the while the officials' nomes were in Throop.

A modern schoolhouse was erected in the center of the town. It was ungraded and presided over by a teacher from Olyphant or Throop. On bitter Winter days when snow was several feet deep, ne of the officials would send a conveyance into town to bring the

teacher to her young charges.
Daily the children of the town learned their ABC's and great stress was laid upon the Palmer method of penmanship, arithmetic, learned their ABC's and great stires was laid upon the Palmer method of penmanship, arithmetic, spelling and grammar. Students leaving the school for a graded in-



. boarded up home where William Tarbox, electrician, lived, first of Underwood homes to die under company edict.

apt to find they could do compound fractions and carpet a floor, but were a little at a loss as to the capital of Georgia, or who won the French and Indian War. On Sundays, the school became a church, and visiting preachers would deliver the sermon to the older people, while a few of the compound the first sunday School for the children. for the children.

#### No Stores in Village

There were no stores in this infant village, which received its name when the late F. D. Underwood, then president of the Er. Railroad, visited there shortly a ter its completion. The townspeo-ple were so impressed with their

Throop, meeting the car line in Throop, and proceeding into Scranton, where the women might buy their frills and furbelows.

buy their frills and furbelows.

There was no doctor or nurse,
the residents depending for expert medical care upon the practitioners of either of the adjoining
boroughs. It was up to the women,
in most instances, to render first
aid to children or their menfolk
hurt in the mines.

Typescript of the conclusion of this article is given on the following page.

## Miners' Monthly Rent \$6

In the center of the town, two bath houses were built. These were a decided innovation for a mining town, and were for the use of the wives and children of the miners. The first up-to-date wash house every built for a mining town, as for the convenience of the miners. All the houses were electrically lighted from the electric plant at the colliery, and the houses were heated from the company's steam plant. A nominal rent was paid for the houses, and electricity and heat were furnished gratis. Miners paid approximately \$6 per month and officials \$15 per month rent.

All the streets were paved and there were sidewalks throughout the town, which for a mining village was quite something, when one recalls the abandoned railroad track that provided the main thoroughfare in the bituminous village of Dagis Mines for a

great many years.

The village boasted of the first modern colliery, steel constructed, and one of the first modern playgrounds. There were garages for each official, and one large garage at the end of the street for the miners. In the early days of Underwood, Model T Fords caused almost as much consternation as a mine accident. One resident, returning from Throop, counted two hens, two ducks, one dog and a telegraph pole to his credit, in the space of a very short time.

The recreational life of Underwood was also up-to-date. There were tennis courts and a baseball field. One of the popular Saturday afternoon sports was the shooting match,

in which women and men alike would vie for the prize of a fat hen or turkey.

The village of Underwood has always been linked inexoriably with the anthracite industry, and is one of the few towns of its kind that had little labor trouble. The mines, at that time, were running in three shifts, day and night, and their was little difficulty between the miners and operators. Of course, there was an occasional shooting, and some upstart would take revenge for a real or fancied grievance by dynamiting an official's home, always with little physical harm to the occupants.

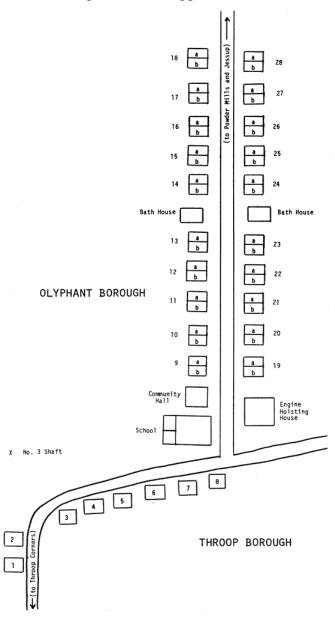
It was an exciting life that Underwood led during its boom stage. There was scarcely a day that there wasn't something, be it a quarrel between a miner and his wife (and the whole town knew about it at once) or something happening in or around the mines.

The history of this mining town would not be quite complete without mentioning the colliery superintendents, in whom a great deal of the authority for running the town was delegated. There were but five of them, the first having been E. C. Weichel, who was followed by William Jeffrey, Fred Beecham, Cort Snyder and Arthur Wrightson, Jr., the present superintendent.

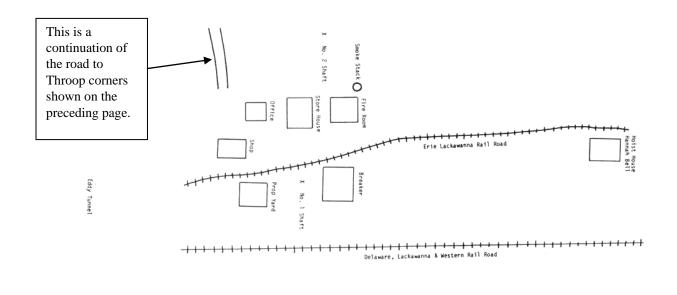
Underwood has entered upon the final stage. By October many homes will be evacuated. And thus ends another chapter in anthracite mining.

Note: The first four lines in this column are here reprinted exactly as they appear in the July 29, 1936 newspaper article. These four lines should, perhaps, read as follows: "In the center of the town, two bath houses were built for the use of the wives and children as for the convenience of the miners. These were the first up-to-date wash houses ever built for a mining town, and were a decided innovation..."

Given on this and the following page is a map that was drawn by the author of Underwood, Lackawanna County, PA, based on information that was reported to him by Walter Silas Powell, of Carbondale, PA (who lived in Underwood from 1914 o 1930), in an interview with the author (one of his sons) on May 16, 1981. Presented following this 2-page map are three additional pages of information on Underwood that were recorded at the time that this 2-page map was drawn. These five pages of material on the village of Underwood were published in *Northeastern Pennsylvania*, Volume III, No. 1, August 19, 1981, pp. 21-23.



(Continuation of map given on the following page)



UNDERWOOD, LACKAWANNA COUNTY, PA.

UNDERWOOD, Lackawanna County, PA. This map was drawn by S. Robert Powell on the basis of information reported by Malter Silas Powell, of Carbondale, PA, in an interview on May 16, 1981. Walter Silas Powell lived in Underwood from 1914 to 1930.

All of the following information on the village of Underwood was reported by Walter Silas Powell to S. Robert Powell in an interview on May 16, 1981:

- --the village of Underwood no longer exists; the only extant structure of this mining village is the smoke stack of the Fire Room--the location of this smoke stack in relation to Throop, PA is shown on the map on page 22 of a portion of Throop, PA
- --Underwood was located in Olyphant Borough and Throop Borough; the buildings numbered 1 through 8 on this map are the houses that were occupied by the mining officials; these eight houses were located in Throop Borough, the rest of the village was located in Olyphant Borough
- --the buildings numbered 1 through 8 on the above map are the houses that were occupied by the mining officials--these houses each had eight rooms, four upstairs and four downstairs; the buildings numbered 9 through 28 are the double houses that were occupied by the miners--these houses each had six rooms in each half, three upstairs and three downstairs; the one-family houses had hot and cold water but no inside toilets; the rent for the two-family houses was \$10 per month, the rent in the one-family houses was \$10 per month, the rent in the one-family houses was \$15 per month; in both kinds of houses, the rent included heat and electricity, the heat was steam heat from the mines; the Bath Houses were for the use of the occupants of the two-family houses; MSP: "One of the Bath Houses, the one between houses number 23 and number 24, was later converted into the village store, which was run by Peter Champacinni, When he died, the store was run by his son, Joe, and then by Frank Mitbeck. On Sundays, Joe Champacinni would usually go into town for a real Italian dinner. One time, Joe and I went to Buscarini's on Spruce Street in Scranton for an Italian dinner."

# -- the occupants of houses 1 through 8:

- 1 Mr. and Mrs. Louis Lightner; Mr. Lightner was a mine foreman
- Mr. and Mrs. Charles Beacham; Mr. Beacham was the colliery superintendent; their children: Charles, William
- 3 Mr. and Mrs. Jack Elvidge; Mr. Elvidge was a mine foreman; their children: Amy, Russell
- 4 Mr. and Mrs. Tom Cordy; Mr. Cordy was a mine foreman; their children: Nellie, Catherine, Robert, Tom, David
- Mr. and Mrs. Arthur Wrightson; Mr. Wrightson was a mine foreman; their children: child, child, child, child
- 6 Mr. and Mrs. William Dick; Mr. Dick was the plumbing engineer; their children: James, William, Agnes, Louise, child
- 7 Mr. and Mrs. Silas Powell; Mr. Powell was the electrical engineer; their children: Ruth, Walter, Frances, Lillian
- Mr. and Mrs. Hugh Walker; Mr. Walker was the outside foreman; their children: Jim, Ruth, William, Janet, Howard, Hugh, Donald

### -- the occupants of houses 9 through 28:

- 9a Mr. and Mrs. Jack Shotten; their children: Howard, Robert
- 9b Mr. and Mrs. Billy Newman; their children: Lotte, William
- 10a Mr. and Mrs. William Burns; their children:
- 10b Mr. and Mrs. Steve Fitzsimmons; their child: Steve
- 11a Mr. and Mrs. Jim Bowden; their children: Betty, boy
- 11b Mr. and Mrs. Jack Travis; their children:
- 12a Mr. and Mrs. Frank Sheridan; their children: Margaret, Milton
- 12b Mr. and Mrs. Peter McCone; their children: none
- 13a Mr. and Mrs. John Browning; their children: Joseph, George, Reginald, Alvin, Albert, Blanche, Arnola
- Mr. and Mrs. Jack Balderson; their children: Ernest, Jack, Harry, Alfred, Albert, Emma, Jennie, Ethel
- 14a Mr. and Mrs. Billy May; their children: Billy, child, child, child
- 14b Mr. and Mrs. Jack Bowden; their children: child, child
- 15a Mr. and Mrs. Frank Lake; their children: Jack, Frank
- 15b Mr. and Mrs. Washine; their child: Blair
- 16a Mr. and Mrs. Frank Judge; their children: Francis, Robert, Mary
- 16b Mr. and Mrs. Milton Shoemacher; their child: Viola (m. Jack Sheridan)
- 17a Mr. and Mrs. Elijah Walker; their children: child, child, child
- 17b Mr. and Mrs. Harry Bowden; their children: Henry, Myvany
- 18a Mr. and Mrs. Daddy Atkinson; their children: none
- 18b Mr. and Mrs. Jack Harris; their children: Bill, John, Isabelle, child, child
- 19a Mr. and Mrs. William Hulse; their child: Sidney
- 19b Mr. and Mrs. Leroy Webb; their children: Mildred, Russell, boy
- 20a Mr. and Mrs. Bill Logan; their children: none
- 20b Mr. and Mrs. Russell Elvidge; their children:
- 21a Mr. and Mrs. Joe Burns; their child: Joe
- 21b Mr. and Mrs. Hank Coats; their children: Margaret, Shirley, Jackie, Russell
- 22a Mr. and Mrs. Harry Sharples; their children: Betty, Lillian, Harry
- 22b ?

```
23b
      Mr. and Mrs. Charles Moretti; their children: Eva, Evo
      Mrs. Margaret Coats and her son-in-law, Mr. Frank Whitbeck
24ь
      Mr. and Mrs. Peter Basalyga; their children: Mildred, Marie, Eugene
25a
       Mr. and Mrs. Ernest Balderson; their children: none
25b
       Mr. and Mrs. Leonard Sherick; their children:
26a
26b
       Mr. and Mrs. Hank Krysta; their children: child, child
27a
       Mr. and Mrs. Mason; their children:
27b
       Mr. and Mrs. Wagner; their children:
28a
28b
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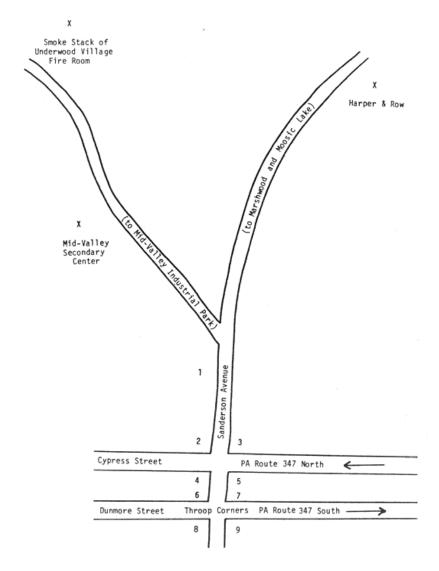
--Underwood was originally owned by the Pennsylvania Coal Company; later it was bought by the Pittston Coal Company; the principal coal veins in Underwood were named as follows: Pittston, Rider, Rock, Top Clark, Bottom Clark, Top County, Bottom County, First Dummore, Second Dummore, Third Dummore

--No. 1 Shaft was a coal shaft; No. 2 Shaft and No. 3 Shaft were for the men to enter and exit from the mines; at the Engine Hoisting House the cars ran up and down the slope on the Clark and County veins

--the community of Marshwood was located about two miles west of Underwood; in Marshwood there was a one-room school; MSP: "Buzz Collier was the teacher there for years. He walked from Consburg to Marshwood. Pilger's Hotel was in Marshwood. There were five or six families that lived in Marshwood. The Clark family lived there. They had ten or twelve kids."

On January 6, 1983, the author made the acquaintance of Gene Basalyga at the Town Meeting on the subject of the Carbondale Post Office that was held in the Berean Baptist Church, Carbondale. At that time, Basalyga said to the author: "Your father was the best sling shot maker in Underwood." The author mentioned that fact to Walter Powell, who then made a sling shot for the author.

- --the school house in Underwood contained three rooms; there were six grades in the school--two per room; church services were held in the largest of the three rooms; three of the teachers in Underwood during the time when Walter Silas Powell was a student at Underwood were Lucy Fadden, Miss Milligan, and Alice Sweeney; the children of the village of Underwood attended the village school for grades I through 6; for junior and senior high school, the children who lived in the Olyphant section of Underwood attended Olyphant Junior High School and Olyphant Senior High School; for junior and senior high school, the children who lived in the Throop section of Underwood had the choice of attending either the Throop schools or the Olyphant schools; WSP: "Originally there was a horse and surrey, in the summer, and a horse and sleigh, in the winter, that took the kids to the streetcar line at Throop. The transportation was supplied by the coal company. In the 1920s they got a school bus. Billy Burns was the bus driver. We got the streetcar at Throop Corners. The Cordys [occupants of house number 4] sent their kids to Throop, maybe the Elvidges [occupants of house number 3] did too. They were the only ones who did. Everyone else went to Olyphant Junior High School and Olyphant Senior High School. When I was in high school, I delivered papers in Underwood."
- --in the Community House there was a library, a bowling alley, a recreation hall and a couple of pool tables; WSP: "I was a pin boy at the bowling alley. They paid 75¢ for a match game, and maybe they gave you 25¢ tip"; behind the school was a baseball field
- --in the Shop there was an electric shop, a machine shop, and a blacksmith shop
- --upstairs over the Fire Room was the Shifting Shanty--where the miners changed their clothes
- --the Erie Lackawanna Rail Road is the railroad that served Underwood; the Delaware, Lackawanna & Western Rail Road, which passed nearby the village, had no connection with Underwood



THROOP, PA.

THROOP, PA. This map, drawn by S. Robert Powell, of a portion of present-day Throop, PA shows the relationship of the only extant structure in the village of Underwood-the smoke stack of the Fire Room--to Throop, PA. The distance from Throop Corners to the site of the village of Underwood is 1 1/4 miles. The numbers on this map indicate the location of the following:

Cintorin Osady
SV. Jana Krstitela
Throop, PA
7 First Eastern Bank, Throop Branch
empty lot
8 Island Bar
empty lot
9 DIC Mfg. Co.
Throop, PA
Scranton, PA
empty lot

Mrs. Clare Parry who, in 1959, became Blakely Borough's first and only female Burgess, was born and raised in Underwood. Her recollections of daily life in the village of Underwood are the primary content of the article about her that was published in the May 1, 1986 issue of the *Mid-Valley News*. Here is that article:

# Mid-Valley News

"Serving Your Hometown"

Thursday, May 1, 1986

Vol. L No. XVII

# Blakely's First Woman Burgess Recalls Life in Underwood

Fifty years have come and gone since the busy little mining community called Underwood ceased to exist, but for area residents who lived in that village, memories of their life spent there are fondly recalled. One such former Underwood resident is Mrs. Clare Parry, 204 Lackawanna Ave. Olyphant

Lackawanna Ave., Olyphant.
Underwood was a practically self-sufficient little village created, naturally enough, along Underwood Road in Olyphant, by the Pennsylvania Coal Co. in 1914. Today, all that remains of the bustling community are the company breaker's smokestack and some ruins of building foundations. A passing motorist who didn't know a community once existed there would never suspect it by present appearances.

"There were 20 double-block houses there, 10 on each side of the road. Those were for the miners and their farmilles," said Mrs. Parry, who resided in the village for about 25 years. In addition, eight single houses for mine bosses and their families were also provided by the coal company, six along a road leading to the colliery, and two others on the road toward Throop. Far from a collection of sad, little hovels in which miners and their dependants lived at the brink of poverty, Underwood was a model company community. "The homes were beautiful, with six rooms on each side of the double blocks. The rent was \$15 a month, and that included utilities," Mrs. Parry said of the two-story houses which were repainted every two years by the company. Garages for company employees' cars were constructed on the backyards of many homes.

There was a school for first through sixth grade students on the site, staffed by Miss Alice Sweeny and other Olyphant School District teachers, Mrs. Parry recalled, while students in the

junior and senior high school grades either walked or were bussed down to the former high school on Susquehanna Avenue, Olyphant.

The Underwood School was housed in part of the village community center, where nondenominational church services were held each Sunday by Rev. Hanton of the Throop Methodist Church. The village also had its own dance hall, a library, and a two-lane bowling alley where, as a teeanger, Mrs. Parry served as a "pin girl." In addition, there was a general store operated by Peter Ciampicini, which included a substation of the Olyphant Post Office where village residents picked up their mail. Mrs. Parry worked at that store and later at Newberry's, a spot now housing the Regal Room, Olyphant. The village also had a playground and a baseball field. Among the families Mrs. Parry recalls living at the village were the Cimpain's

Among the families Mrs. Parry recalls living at the village were the Ciampicinis, the Newmans, Burns, Bodens, Shottens, Atkinsons, Litvons, Walkers, Elvidges, Lightners, Powells, Dicks, Logans, Baldersons, Coates and Basaly-

By about 1936, most of Underwood's 48 families had moved away since coal veins were becoming depleted and mining jobs gradually ended. Mrs. Parry, daughter of Mr. and Mrs. Joseph Browning, was born in Olyphant's Fern Hill section in a home near the Whitbeck farm located a few blocks from the old Columbus School on E. Scott Street. When she was three years old, the Brownings moved to Underwood.

In 1934, Miss Clare Browning became the bride of Evan Parry, Blakely, who worked as a butcher at Ralph Fritz's Store, located in the spot that was most recently home to Lena and Mary Crotti's grocery store on Lackawanna Avenue, Olyphant. Mr. Parry later opened a restaurant and bowling alley at the corner of W. Lackawanna and Main Avenue, Blakely, and a grocery store on Third Street, Blakely, in a spot now occupied by E.T. Davies Associates. Mr. Parry was elected burgess of Blakely in 1954, and died in 1959 during

Mr. Parry was elected burgess of Blakely in 1954, and died in 1959 during his second term. Mrs. Parry was appointed to serve out her husband's term which ended in 1962, and thus became Blakely Borough's first, and so far, its only woman mayor. Following her husband's death, Mrs. Parry operated their grocery store alone until retiring in 1976. She and Mr. Parry were the parents of two children, Gloria Jean, now Mrs. James Murphy, Endicott, N.Y., and Joseph Parry, Dallas, Texas. Mrs. Parry also has seven grandchildren and is a member of the Calvinist United Presbyterian Church, Olyphant.

The Spring-Summer 1930 issue of *The Informer* contains a telephone directory for Underwood Village. That directory is given on the following page.

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# Comprising

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# Spring-Summer 1930

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ARTIST PHOTOGRAPHER

506 BOWMAN BLDG.

SCRANTON, PA.

SITTINGS By APPOINTMENT ONLY

# EXPERT WATCH AND JEWELRY REPAIRING

# J. W. McAuvic Co., Inc., Jewelers 126 WASHINGTON AVENUE

| 520         Williams         Williams         .895           525         Simpson Oliver         .318-R         .1204-J           530         Morgan H R         .1204-J         .1204-J           531         Cousins J H         .1075-R  | 153 Legenza Joseph<br>157 Naugin Wm J<br>172 Cimoch Frank  |
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| 100 Jones Arthur E   | 516 Klimuszko Wm   |
| 116 Gallagher Terry812-M   | 619 Nodge Rosella  |
| 118 Wayno Joseph   | 652 Nudge Ino A  |
| 132 Schultz J G  | 708 Keyasko John A   |
| 142 Fabretti Fred C  | 710 Kovaca Paul  |
| 142 Throop Fire Chief 1107   | 932 Biobardson Cosses  |
| 202 McAndrew Michael C 444   | 032 Michardson George  |
| 202 McAndrew Marcaret  | ł.   |
| Cor Grasham's Camina Ct  | MIIDDAV  |
| 203 Comban Thornton Sta208   | MORKAI   |
| 303 Gresnam (nos   | Fm Dunmore st e  |
| 309 Grand Union Shoe Re-   |  |
| pairing Co   | 718 Gombar Emil F .  |
| 312 Veltri John  | 718 Gombar Margaret  |
| 318 Novak Albert A Dr  | 820 Kremko John  |
| Throop State Bank 1033   | i  |
| 326 Truskolaski F P  | NODELL   |
| 409 Halloran J F 464   | NORTH  |
| 410 Delaney Drug Store 1242  | Fm Hull st e to George   |
| 412 Friedman's Dent Store 1505 1   |  |
| 413 Varkonyl Micholan Pau  | 53 Chontos Julius  |
| 417 Knoon Philip   | 516 Schultz Andrew   |
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| 410 United Clear Store786-M  | 535 Lebowitz B   |
| 500 Weinsteln Cigar Store  |  |
| 500 Weinstein Esther336  | DEAD!  |
| 302 Stein Samuel   | PEARL S  |
| 510 Muto Ralph   | 017 1  |
| 515 Bagley M A Dr  | 013 Lapper John  |
| 515 Jones Harry E  |  |
| 517 Mid-Valley Electric Co 1231-R  | PHILIPOVITO  |
| 603 Throop Hardware Co 988   |  |
| 6061/3 Idle Hour Tea Room 1491   | 183 Keyasko George   |
| Cor Ritz Motor Co 434  | 191 Washenik Romayne   |
| 625 Nemeth Louis 919.1   |  |
| 705 Pazitka Frank 000  | REBECCA  |
| 708 Jacoby Milton 20. I  | KEBLCCA  |
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| 714 Nagy John  | Mari 44 44   |
| 715 Fitzgerald Macy E Mice con M   | Throop Hose House  |
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| 26                | WASHINGTON AVENU   |
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|                   | HAVERLY ST   |
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|                   | MARY ST  |
| 919               |  |
|                   | MEADE ST   |
|                   | Charles at e to Cypress  |
| 516               | Soroka F   |
| 615               | Nodge Rosella1297-J  |
| 652<br>708        | Nudge Jno A  |
| 710<br>832        | Soroka F   |
|                   | MURRAY ST  |
| Fm                | Dunmore st e   |
| 718<br>718        |  |
| 820               |  |
|                   | NORTH ST   |
|                   | Hull st e to George st   |
| 516               | Chontos Julius   |
| 516<br>534        | Berger Bennet243-M   |
| 535               | Lebowitz B   |
| 813               | PEARL ST   |
| 613               |  |
| 183               | PHILIPOVITCH ST  |
| 191               |  |
|                   | REBECCA ST   |
| Fm                | Boulevard e to Jones st  |
| 113               |  |
| 215               | Bagley Bernard F27-R   |
| Cor               | Pendel Jule M  |
|                   | RIDGE ST   |
| Fm                | Elm n to Ash   |
| 1004              | Lyons Molly  |
| 1008              | Murphy Marguerite  |
| 1018              | Murphy Marguerite (019<br>Hammond Mary R Miss953-M<br>Roe Oliver J |
|                   | SANDERSON ST   |
| Fm<br>w           | Lackawanna river s and e to Marsh-<br>ood Rd                       |
| 108               | Smith Walter   |
| 399               | Gretton Albert1218-J   |
| 413               | Dixon Richard  |
| 426<br>428        | Allen Edw P  |
| 429               | Budash Michael R1269   |
| 4 15              | Jones John E 1117  |
| Cor<br>501        | Klesel Stephen E 737   |

| E   |
|---|
| 520   |
| SIMPSON ST  |
| Fm George to Cypress 709 Coar Martin J  |
| SOUTH ST   Fm Hull at e to George at   519   Seeh Anna Miss     831-W   523   Sherota   Joseph F     418   STATE ST   Fm George e |
| 624 Sledzinski Geo828-R   |
| STEINECKE ST 2 Golembesky Jos106  |
| S VALLEY AVE (See Dunmore St) MUTO BUILDING 510 GEORGE ST Flannelly G J Dr  |

# **UNDERWOOD**

**UNDERWOOD VILLAGE** 

| VILLAGE                |
|------------------------|
| Balderson Ernest472-W  |
| Bowden Jas403-R        |
| Browning Jos           |
| Burns Jos H            |
| Coates Henry401-M      |
| Cordy Thos E           |
| Dick William856-J      |
| Elvidge Jno1282-W      |
| Elvidge Russell472-M   |
| Fitzsimmons Steve403-M |
| Harris John            |
| Hoodmacher Milton402-M |
| Krysta Casmar401-W     |
| Lake Jno402-W          |
| Leitner L              |
| Logan Wm400-R          |
| May Wm                 |
| McKone P J Mrs856-M    |
| Moretti Chas401-J      |
| Newman Wm403-W         |
| Neary Dominic856-W     |
| Powell Silas1282-J     |
| Shotton John           |
| Sheridan Frank J856-R  |
| Sweet Paul             |
| Walker Elisha402-J     |
| Whitbeck Frank A403-J  |
| Wrightson A            |

Underground Mining came to an end at Underwood in 1953, when 300 Pennsylvania Coal Company miners there were laid off. That we know from an article that was published in *The Scranton Times*, Tuesday, February 25, 1992. In that article, the author cites Frank Brandon of Clarks Summit, who used to help survey the underground tunnels at Underwood, as his authority on the question. Here is that article:

"A Miner Matter / A recent article I wrote about the Underwood Colliery in Olyphant brought me a call from Frank Brandon, Clark's Summit, who used to help survey the underground tunnels of that mine. / Brandon, who operates Parkton Heating and Plumbing in Glenburn, picked me up on when the Underwood Colliery in Olyphant ceased operating. / I had used a source that said that mining halted in the 1930s but Brandon said the mining was still going on when he left Pennsylvania Coal Co. in 1951. / That sent me on a search for information. I finally determined that the mining ended in 1953, when 300 miners were laid off. / Brandon graduated from Central High School in 1943 and, through a friend, got a job as a member of a Pennsylvania Coal Co. surveying crew. / Brandon said it was the job of the surveyors to track the progress of digging in the mine. Every two weeks, different teams of surveyors determined the amount of 'yardage' of dirt and rock that had to be moved to reach coal veins. Similarly, information was collected on the amount of timbering that was done. This combined information determined the pay of miners. / In addition, he said, surveys were made every three months and the information was then used to update the maps at the company's headquarters. / While with the Pennsylvania Coal Co., Brandon said he worked in many mines, but the Underwood and the Dunmore shaft (which had chambers under what was the old Apawana Golf Course) were the principal ones. / **Down and Under** / Brandon said there was never any guessing done in surveying the mines. On occasions, he recalled, he crawled into a 22-inch vein so that accurate measurements could be given to the company. / Surveyors placed markers on the roofs of the mines so that they could chart the progress of digging between visits. / I thank Brandon for calling me and straightening me out on the Underwood closing." (*The Scranton Times*, Tuesday, February 25, 1992)

In 1992, Joan Dutka, Olyphant, chaired an initiative to preserve/save the smokestack of the former Underwood Colliery "as a reminder to future generations of their mining heritage." The owners of the Mid-Valley Industrial Park did not share Ms. Dutka's interest in the preservation of the smokestack and said that their intention was to implode the smokestack to clear the ground for future industrial prospects. The article given below about the smokestack was published in the *Scranton Tribune* of November 20, 1992:

# Effort Would Be Monumental

A 200-foot-high smokestack from the old Underwood Colliery in Olyphant — the most prominent relic of a mining operation that once employed 1,800 men — stands like a lonely sentry overlooking the Midvalley.

If the owners of the Mid-Valley Industrial Park have their way, they will implode the smokestack to clear the ground for industrial prospects. Indeed, they already have plans to do that.

However, if Joan Dutka, an

they already have plans to do that.

However, if Joan Dutka, an Olyphant housewife and former councilwoman has her way, the smokestack will be saved as a reminder to future generations of their mining heritage.

The Underwood Colliery — once a state-of-the-art operation of Pennsylvania Coal Co. — opened in the early 1920s and thrived for years.

The Underwood development was a model of what a conscientious firm could do. Many the workers lived in the village that sprang up around the mine. The homes were a cut above those in older company-owned towns.

spining of another the meeting of the company-owned towns. There even were areas set aside for recreation for the workers and their families.

However, the demand for coal diminished sharply after World War II, as oil and gas grew in popularity. The Underwood opperation, down to 300 workers, closed in 1953.

The colliery rusted away and nature reclaimed those parts of it that strip mining missed. All that exists now is the smokestack from an engine house where steam was generated to pull cars, some carrying miners and some carrying coal, from the underground tunnels.

# Mining Relic

Mining Relic

Mrs. Dutka would like the smokestack to be saved as a free-standing relic of the glory days of anthracite mining and a monument not just to miners, but their families, too. "I don't want a park that needs maintenance or anything like that," she said, adding: "There could be a gravel walk leading up to it and a bronze plaque on it to give a brief history of Underwood."

Owners of the industrial park want to implode the smokestack to make the site suitable for new industrial tenants. The park now has WEA Manufacturing! Specialty Records as its major tenant, plus smaller operations, but it still has plenty of room to expand into the area where the smokestack now stands.

Mrs. Dutka has scored one little victory so far. She got the Olyphant Council to delay the implosion of the smokestack until it can gather independent information on its condition. To that end, it retained an engineering firm to look at the smokestack and it made a pre-liminary finding that the top 10-feet has mortar that needs to be repaired.

However, Mrs. Dutka thought it

reet has mortar that needs to be repaired.

However, Mrs. Dutka thought it would be best to have the smo-kestack examined by experts who specialize in such things. A spectator at a Council meeting, Wasil (Batch) Piesechko, provided her with the name card of Gerard Chimney Co., St. Louis, Mo., a firm which has for years been taking care of chimneys at Scranton Lace Co., where he once worked. She called that firm and a spokesman said an expert would be flown here at no charge to examine the smo-kestack. She is now waiting for that to happen. that to happen.

# Expenses Plan

In the event the smokestack has to be repointed and capped, Mrs. Dutka has a plan to cover

has to be repointed and capped, Mrs. Dutka has a plan to cover such expenses.

Olyphant has its own electric plant that buys electricity from Pennsylvania Power & Light Co. and then sells it to the residences, businesses and other customers. In a dispute over prices, the people of Olyphant won a judgment of \$40,000 against PP&L, which is payable in monthly increments of \$2.42 to customers. Mrs. Dutka wants the council's electric committee to ask residents in their January bills if they would agree to divert the refunds from PP&L to the smokestack project. "I've already talked to a lot of people and have yet to get a negative answer," she said.

However, all Mrs. Dutka's efforts could come to naught if the owners of the industrial park insist on imploding the smokestack. It is, after all, on their land.

land. land.

However, she hopes park owners could be convinced that saving the smokestack might be useful to them. It could be woven into landscaping being planned for the park, giving it an interesting historical centerpiece that might prove useful in marketing.

Mrs. Dutka said if the smokestack can be capped and re-

Mrs. Durka said it the smorestack can be capped and repaired, it would need no other maintenance. As for its safety, she said: "It will stand until the next Ice Age."

Prefrene 11/20/92

Not surprisingly, the wishes of the owners of the Underwood colliery smokestack were carried out and the smokestack was torn down.



Play Ground / Ball Field, Underwood



Recreation House, Underwood

# Anthracite Mining and Railroading Industries, Carbondale, 1941

The coal industry in Pennsylvania in the World War I and II era is described, as follows, in *Coal in Pennsylvania* by Edmunds and Koppe as follows:

"The Pennsylvania coal industry saw it greatest year in 1917, when 329,000 miners produced a staggering 278 million tons of coal worth \$705 million. World War I was at its height, American industry was straining every muscle, and virtually everything that required power ran on coal—industry, railroads, steamships, electrical generation, and most home and commercial heating. / The years following World War I which led to the Great Depression of the 1930's saw American industry virtually grind to a stop and coal requirements decline accordingly. World War II and the following years of national industrial growth increased the need for coal, but not in proportion to the general expansion." (Coal in Pennsylvania by William E. Edmunds and Edwin F. Koppe, Illustration by Alber Van Olden, 1968, p.2)

A copy of the July 1941 edition of the *CARBONDALE* and *Nearby Points TELEPHONE DIRECTORY* was donated to the Carbondale Historical Society on July 10, 2011 by Ron Konosky. Therein there are many interesting listings and ads that relate to the anthracite mining and railroading industries in Carbondale and the Lackawanna Valley at the time. Here are some of the many interesting pages in that directory, in which the Hudson Coal Co. ad shown below was inserted:



# D&H phone listings in the 1941 Carbondale telephone directory:

| Delaware & Hudson Railroad Corp         |        |
|---|--------|
| Car Distributor N Main                  | 884    |
| Claim Agent N Main                      | 791    |
| Coal Billing Station Carb Yd            | 672    |
| Coal Storage Agent S Carb               | 1924   |
| Crew Dispatchers Dundaff                | 137    |
| Dispatchers N Main                      | 101    |
| Division Engineer N Main                | 729    |
| Division Storekeeper Division Office bl | .600-J |
| Divisional Car Foreman N Main           | 171    |
| Freight-Ticket Office Mill              | 60     |
| General Foreman Bridge & Bldg N Main    | 600-R  |
| General Yardmaster Railroad Yd          | 138    |
| Joint Inspector Carb Yard               | . 1505 |
| Light Yard Office Carb Yd               | . 1505 |
| Master Mechanic Railroad Yd             | 142    |
| Police Department N Main                | 209    |
| Road Foreman of Engines Railroad Yd     | 426    |
| Round House Railroad Yd                 | 685    |
| Signal Supervisor N Main                | 425    |
| Superintendent N Main                   | 5      |
| Trainmaster N Main                      | 100    |
| Yardmaster Railroad Yd                  | 1406   |

| B & L Coal Co River & Keystone av                |
|--|
| Peckville Olyphant-484                           |
| Benjamin Coal Co Greenfield road Carbondale-1119 |
| Calverio Albert rear Front Jessup Olyphant-1245  |
| Childston Fuel Co Inc Mayfield Jermyn-89         |
| Coal Rain Coal Co                                |
| 265 N Washington av Scranton-4-1000              |
| Consagra Coal Co 301 Main Blakely Olyphant-612   |
| Continental-Archbald Coal Co                     |
| S Keyser av Scranton-3-7240                      |
| Dante Coal Co Hill Jessup Olyphant-1273          |
| Dial Rock Coal Co                                |
| Scranton National Bank bl. Scranton-2-8114       |
| Drinker Coal Co Meade Dun Scranton-3-7911        |
| Duryea Anthracite Co                             |
| rear Keyser Valley Car Shops Scranton-3-3707     |
| Dzwonczyk Joseph N Archbald Jermyn-257           |
| East Bear Ridge Colliery Co                      |
| Scranton Electric bl. Scranton-3-6152            |
| Eddie & Joe Coal Co                              |
| Upper Jefferson Simpson Carbondale-1198          |
| Edison Anthracite Coal Co                        |
| Scranton Electric bl Scranton-3-6152             |
| Esgro Dominick E Jermyn Jermyn-413               |
| Faramelli Coal Co                                |
| Moosic Lake road Jessup Olyphant-92-R-3          |
| Gianforcoro George Lower Powderly Carbondale-269 |
| Gillen Thomas J rear 78 Cottage. Carbondale-1501 |
|  |
| Glen Alden Coal Co                               |
| Jefferson av & Linden. Scranton-6131             |
| Green Top Coal Co Inc Jessup Olyphant-761        |
| Greenwood Mining Co Greenwood Scranton-3-7613    |
| Grzebin George                                   |
| Moosic Lake road Jessup Olyphant-92-J-4          |
| Heidelberg Coal Ca AvocaScranton-5291            |

| HUDSON COAL CO THE                           |
|--|
| 424 Wyo av Scranton-2-3171                   |
| Hudson Coal Co The                           |
| Marvine Colliery                             |
| Colliery Superintendent Scranton-2-7337      |
| Colliery Office Scranton-2-5511              |
| No 2 Shaft Hoist House Scranton-2-7509       |
| Weigh Office Scranton-2-5875                 |
| Providence Repair Shop                       |
| Shop Office                                  |
| Shop Superintendent Scranton-3-2112          |
| Providence Store & Offices                   |
| General Store Scranton-4-1811                |
| Chemical Laboratory Scranton-3-5713          |
| Greenwood Substation Scranton-3-2414         |
| Billing Office Railroad Yard Carbondale-1084 |
| Retail Sales Office Dundaff Carbondale-29    |
| Coal Brook Colliery                          |
| Colliery Superintendent Carbondale-18        |
| Store House                                  |
| Powderly Colliery                            |
| Colliery Superintendent Carbondale-1189      |
| Weighmaster Carbondale-1035-J                |
| Powderly Substation Carbondale-780           |
| Jermyn Colliery                              |
| Superintendent's Office Jermyn-18            |
| Colliery Clerks' Office Jermyn-201-J         |
| StorehouseJermyn-201-R                       |
| Jermyn Switching StationJermyn-299           |
| Gravity Slope Colliery                       |
| Colliery Superintendent Archbald Jermyn-212  |
| StorehouseJermyn-233-J                       |
| Weighmaster Archbald Jermyn-20               |
| Dutch Hill Switching Station Jermyn-251      |
| Olyphant Colliery<br>Colliery Office         |
| Colliery Superintendent Olyphant-911         |
| Colliery Engineer Olyphant-910-J             |
| Weighmaster                                  |
| Storehouse                                   |
| Olyphant Power Plant Olyphant-825            |
| Olyphant Shaft Mine Olyphant-910-R           |
| Birdseye Mine                                |
| Grassy Island Mine Olyphant-834-J            |

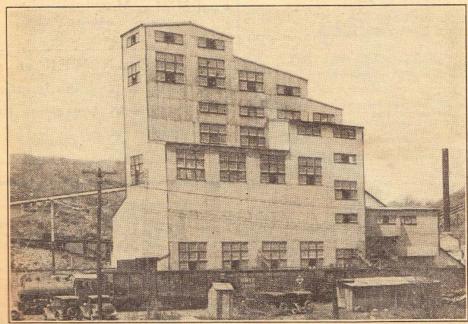
| Jack's Slope   |
|--|
| Moosic Lake road Jessup Olyphant-92-J-1<br>Knappen Coal Co Mayfield Jermyn-205 |
| Lombardo Sam   |
| Moosic Lake road Jessup Olyphant-92-J-3  M D Coal Co Peckville                 |
| McAndrew Coal Co No 5 Hill Archbald Jermyn-618                                 |
| Moffat Coal Co-<br>Office N Main TaylorScranton-6244                           |
| National Mine  |
| Pine Brook Colliery<br>Capouse av & Carbon Scranton-4-1335                     |
| Muldowney Coal Co Inc<br>Scranton Life bl. Scranton-3-4562                     |
| octanion the programma-4362  |

Moosic Lake road Jessup Olyphant-92-R-1 SULLIVAN TRAIL COAL CO INC General Office Exeter av W Pittston. Pittston-3194 General Office Exeter av W Pittston Scranton-3-1257 General Office Exeter av W Pittston, Wilkes-Barre-2-3189 Supreme Anthracite Coal Mining Co Peckville . Olyphant-521 Temple Coal Co Scranton Electric bl. Scranton-3-6152 Throop Mining Co Sanderson av Throop Olyphant-1130 Triad Coal Co Moosic Lake read Jessup Olyphant-92-R-4 Twin Hills Coal Co Coal Exchange bl Scranton-2-8029 Valley View Coal Co Scranton Natl Bk bl. Scranton-3-1656 Von Storch Colliery 1635 Nay Aug av Scranton Jermyn-10 Warren O Y Breck & Remington av Scranton-4-3911
Watrous B H Connell bl ..... Scranton-3-1246
Whipporwill Coal Co Archbald ..... Jermyn-159

# Coal Mining Machinery See Mining Machinery



# HEIDELBERG COAL



**Chance Cone Cleaned Coal** 

TELEPHONES

SCRANTON 5291

MOOSIC 495

### Coal-Retail

ACE COAL CO

300 Main Blakely Olyphant-1412

(See Advertisement Opposite Page)

B & D COAL CO Childs .... Carbondale-434

B & L COAL CO River & Keystone av

Peckville . Olyphant-484

BENJAMIN COAL CO

Greenfield road. Carbondale-1113

Beppler Earl R 834 Harrison av . . Scranton-2-61-

BLUE COAL

FOR LOW COST

HOME HEATING

#### "WHERE TO BUY IT"

Abington Lumber Co Main ...... Dalton-41 Birchard Coal & Express Co

23 Public av. Montrose-106-R

Buckley F A Lanesboro..... Susquehanna-78
Delaware Lackawanna & West R R Co

Gouldsboro Moscow-3205

D L & W Station Kingsley .... Brooklyn-2156 Doherty V M Main ...... Moscow-4411 Merrell F D Church ..... Hallstead-12 Osman Merle LaPlume .... Factoryville-3001

Boylan T P 201 Green Ridge .... Scranton-4-4339

Childston Fuel Co Inc

485 Main Childs . Carbondale-9010

Coal Service Co 1247 8 Main av. . . . Scranton-5224 Consumers' Coal Co 945Adams av . Scranton-4-1550

#### D & H CONE-CLEANED ANTHRACITE

A super-clean, low-ash anthracite mined from richest veins, scientifi-cally prepared by conecleaning; draft-obedient, even-burning, efficient, economical.



"WHERE TO BUY IT"

| BOOTH JOHN INC  |
|---|
| 17 Salem av . Carbondale-1400   |
| Butler J R  |
| 1324 N Webster av Dun Scranton-4-1028   |
| Davis R A 159 Cedar av Scranton-2-8141 DIAMOND COAL & ICE CO                            |
| 950 Penn av . Scranton-4-2226   |
| Kelleher's Coal & Ice   |
| 425 Dean Scranton-4-5206  |
| ZIMAN BRGS 201 Mifflin av . Scranton-2-3574   |
| DAVIS R A 159 Cedar av Scranton-2-8141  |
| DONOVAN F M   |
| 2921 Birney av Minooka Scranton-3-9082  |
| Giombetti Coal Co CortlandCarbondale-1  |
| Greaves Walter<br>1221 Wheeler av Dun Scranton-3-9743                                   |
| GREEN TOP COAL CO INC Jessup Olyphant-761   |
| Hagen Coal Co River & Moltke av . Scranton-3-9785                                       |
| HEIDELBERG COAL CO Avoca Scranton-5291  |
| (See Advertisement This Page) Home Coal & Ice Co  |
| 214 E Grove Dun Scranton-8074   |
| Howe John TLake Ariel-3281  |
| HUDSON COAL CO THE  |
| HUDSON COAL CO THE  |
| Retail Sales Office Dundaff Carbondale-29   |
| Powderly Colliery   |
| Retail Sales Office: Carbondale-1035-R  |
| Gravity Slope Colliery Retail Sales Office Archbald Jermyn-233-R                        |
| Olyphant Colliery   |
| Retail Sales Office Olyphant-834-R  |
| Marvine Colliery  |
| Retail Sales Office Scranton-2-4757<br>Kelleher's Coal & Ice 425 Dean . Scranton-4-5206 |
| KNOTT RALPH   |
| Cone Cleaned Anthracite   |
| Look For The Blue Coal Trucks   |
| 1138 Rundle Scranton-4-0734   |
| (Continued Next Page)   |
|   |
|   |
|   |

| Coal-Retail-(Cont'd)   |
|--|
| LEWIS DICK 429 Birch Scranton-4-1623 (See Advertisement This Page)   |
| LEWIS L A 319 10 av Scranton-3-6925 (See Advertisement This Page)  |
| Maco Co Drinker Dunmore Scranton-3-9468 Meadow Brook Coal Co 1016 S Irving av Scranton-3-0917  |
| Meadowside Coal Co Inc 302 Allen Dun Scranton-4-4012   |
| MELLODY BROS 327 Larch Scranton-4-3996<br>(See Advertisement This Page)  |
| MOFFAT COAL CO N Main Taylor Scranton-6244<br>(See Advertisement Opposite Page)  |
| MULLADY TOM Coal Trucking & Hauling Carbondale 1465 B  |
| 61 Willow av   |
| 729 N Main Archbald Jermyn-486 Passaniti Bros 113 McNichols et Scranton-3-9566 PENN ANTHRACITE COLLIERIES CO   |
| 1635 Nay Aug av Scranton-4-6144 POMPEY COAL CO Baker Jessup. Olyphant-982  |
| (See Advertisement This Page) Pyne Taylor Co S Keyser av & Union Taylor-53   |
| Rock H J 1559 Nay Aug av Scranton-3-2516<br>Simpson Coal Co  |
| Lathrope av & Spencer Carbondale-650 Surace Joseph P 485 Main Childs Carbondale-9010   |
| TUROCK'S  Boulevard av Dickson City Olyphant-9226  |
| VanWert Trucking Co 739 River Peckville Olyphant-1319  |
| Wyoming Co 722 Wyoming avScranton-5346   |
| Coal-Wholesale   |
| Ace Coal Co 300 Main Blakely Olyphant-1412 Benjamin Coal Co Greenfield road Carbondale-1119 Davis R A 159 Cedar av   |
| DeAngelis Vincent S Carbondale. Carbondale-517 James Coal Mining Co Bowman bl Scranton-2-8291 Motley J A Mayfield. Jermyn-107  |
| Pompey Coal Co Jessup Olyphant-418 Shurtleff E Russell First National Bk bl Scranton-2-8864  |
| Smith Fuels Inc. Bowman bl Scranton-2-4050 Stelle Howard A Miller bl Scranton-4-5896 Volpe Coal Co. Inkerman Scranton-3-6412 West End Coal Co. Scr. Electric bl. Scranton-2-6834 |
| West End oval of Bel Electric Di Seranton 2-0054   |

# POMPEY Supreme Anthracite

Heat your home with Penna. Anthracite—Clean, safe and healthy fuel. Ask your dealer for Pompey Supreme Anthracite. Best quality—carefully prepared.

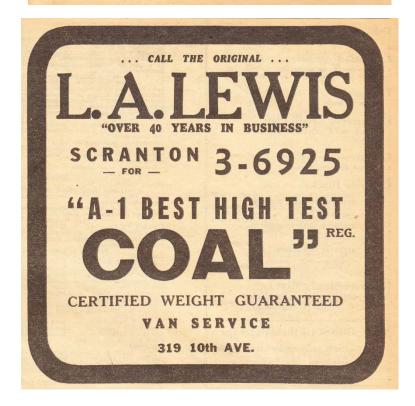


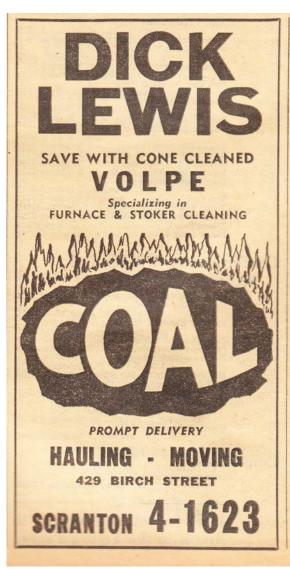
POMPEY COAL CO.

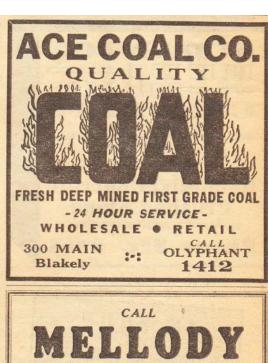
MINE and BREAKER

JESSUP, PA.

Olyphant 982









## Mine Supplies FISHER DAVID Terrace ..... Honesdale-403. Flemmg J R & Son Co Inc Green Ridge & Meylert av Scranton-3-5114 Gaylor & Butler Co Wyo av & Gibson Scranton-2-8348 Potter L B & Co 424 6 av.....Scranton-2-4971 Scranton Supply & Mach Co 636 Wyoming av Scranton-6151 **Mining Equipment** GELB & CO Albright av & Green Ridge Scranton-4-4172 GOLDBERG A S 1407 Main Peckville Olyphant-456 JEFFREY MFG CO 122 Adams av Scranton-2-8635 **Mining Machinery** HUDAK ELECTRIC MOTOR CO 104 W Grove Dun Scranton-3-4931 INGERSOLL-RAND CO 614 Wyoming av Scranton-2-8121 SULLIVAN MACHINERY CO 809 Linden Scranton-2-8016 TOUHILL FRANK 222 Stephen av . Scranton-4-9476 WORTHINGTON PUMP & MACHINERY CORP 418 W 1. Hazleton-4500

| Dailmanda & Dailmana   |
|--|
| Railroads & Railways   |
| Central R R of N J 601 W Lacka av Scranton-8292  |
| D & H Co  Jessup-Peckville Station Olyphant-394/   |
| Olyphant StationOlyphant-503   |
| Passenger Station Boulevard av<br>Dickson City . Olyphant-306-J  |
| Telegraph Office & Yards   |
| N Valley av Olyphant-303   |
| Delaware & Hudson Railroad Corp Car Distributor N MainCarbondale-884   |
| Carload Freight House  |
| 37 Lacka av Scranton-9798<br>Claim Agent N MainCarbondale-791  |
| Coai Billing Station   |
| Carbondale Yard. Carbondale-672  |
| Coal Storage Agent S CarbCarbondale-1924<br>Crew Dispatchers DundaffCarbondale-137   |
| Dispatcher N MainCarbondale-101  |
| Division Engineer N MainCarbondale-729   |
| Division Freight & Passenger Agt<br>37 Lacka av Scranton-2-8751  |
| Division Storekeeper   |
| Division Office bl. Carbondale-600-J Divisional Car Foreman  |
| N Main Carbondale-171  |
| Freight House Wyoming av . Scranton-4-6168   |
| Freight-Ticket Office MillCarbondale-60 Freight & Passenger Station  |
| Archbald Jermyn-252  |
| Freight & Passenger StationJermyn-235-J<br>Freight & Passenger Station   |
| Lacka av Mayfield. Jermyn-134-W  |
| Genl Foreman Bridge & Bldg   |
| N Main Carbondale-600-R  |
| Railroad Yard Carbondale-138   |
| Light Yard Office<br>Carbondale Yard. Carbondale-1505  |
| Master Mechanic  |
| Railroad Yard Carbondale-142 Police Dept 37 Lacka avScranton-2-3424  |
| Police Dept N MainCarbondale-209   |
| Road Foreman of Engines  |
| Round House Railroad Yard. Carbondale-426 Round House Railroad Yard. Carbondale-685  |
| Signal Supervisor N Main Carbondale-425  |
| Superintendent N MainCarbondale-5 Ticket Office 37Lackawanna av Scranton-9547  |
| Trainmaster N MainCarbondale-100   |
| Yardmaster Railroad Yard Carbondale-1406   |
| Yardmaster's Office<br>Green Ridge Scranton-3-2914   |
| ALLOW AND TO THE PARTY OF THE P |

| Delaware Lackawanna & West R R Co            |
|--|
| Station Gouldsboro Moscow-3206               |
| Station Mounts of Control Mossow 2211        |
| Station Market                               |
| ice House Gouldsboro Moscow-2309             |
| Ticket Office                                |
| Lackawanna Terminal Scranton-5251            |
| Green Ridge Freight Station Scranton-3-2913  |
| South Scranton                               |
|  |
| Freight Station Scranton-3-3812              |
| Crew Dispatchers-Yard Office                 |
| Cliff . Scranton-2-3990                      |
| Engine Dispatcher Scranton-2-2135            |
| Erie Railroad Co                             |
| Offices DunmoreScranton-8191                 |
|  |
| Local Freight Agent                          |
| 701 N Washington av. Scranton-3-1179         |
| Erie Railroad Co Railroad yd Carbondale-1073 |
| Erie Railroad Co Wimmers Hamlin-4348/        |
| Erie R R Yard Jessup                         |
| Lackawanna & Wyoming Valley R R Co           |
| Dispatcher's Office Scranton-5141            |
| mishes Office Coventon 2 4515                |
| Ticket Office                                |
| Freight Station                              |
| Baggage Room                                 |
| Auditor's Office                             |
| Gen Freight & Pass Agent Scranton-3-4812     |
| Supt of Transportation Scranton-3-4724       |
| Power Station Scranton-3-4477                |
| Car House Scranton-3-0136                    |
| President's Office Scranton-6621             |
| r resident's Office                          |
|  |

| Railroads & Railways-(Cont'd)  |
|--|
| Railroads & Railways—(Cont'd)  NYO & WRR Co Carbon St Station Scranton-3-2033 Coal Freight Agent's Office Mears bl. Scranton-2-2456 Freight Office Dundaff Carbondale-47 Freight Station Jermyn-461-J Freight Station Dickson City Olyphant-1076-J Freight Station Peckville Olyphant-1491-J Freight Station Peckville Carbondale-793 Providence Station 1634 Nay Aug av Scranton-4-6463 Supt's Office Childs Carbondale-1806 Train & Crew Dispatcher Childs Jermyn-5 Penna Railroad System Mears bl Scranton-5792 Scranton Transit Co |
| General Office  234 Lackawanna av Scranton-5111  Machine Shop Providence rd Scranton-2-2825  Purchasing Agent & Storekeeper  Providence rd Scranton-2-2354  Track & Line Department  Providence rd Scranton-2-2463  Bus Garage Providence rd Scranton-2-1754   |

B&D Coal Company ad in the 1941 Carbondale Telephone Directory:



Paramount Coal Company ad in the 1941 Carbondale Telephone Directory:

# PARAMOUNT COAL CO., INC. 24 HOUR WE SELL THE BEST COAL MINED TRUCKERS A SPECIALTY MAIN OFFICE & BREAKER 729 N. MAIN ARCHBALD Jermyn 486

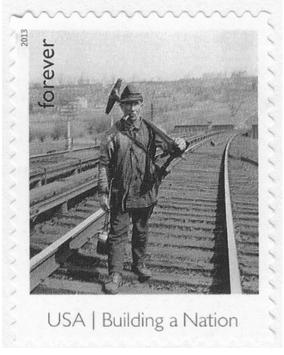
1722

#### Postage Stamps to Honor Coal Miners and Railroad Track Workers; Blakely Mine Memorial; Forest City Memorial to All Pennsylvania Anthracite Coal Miners and Their Families

On August 8, 2013, the United States Postal Service released a set of Forever Stamps, titled "Made in America—Building a Nation." Included in the set is a stamp honoring coal miners and railroad track workers. On the following day, in Wilkes-Barre, there was an unveiling, when the set became available for sale outside of Washington, D.C.

Here are representations of the coal miner stamp and the railroad track worker stamp.





Coal Miner

Railroad Track Worker

A detailed article about that series of postage stamps is presented in Elaine LaGreca's article titled *USPS Issues Postage Stamp to Honor Coal Miners*. The article is published in Volume 15, No. 4 of *The Searcher* Newsletter of the Genealogical Research Society of Northeastern Pennsylvania, Inc., pp. 1, 4-6.

Here is that article:



# The Searcher

Newsletter of the Genealogical Research Society of Northeastern Pennsylvania, Inc.

Vol. 15 No. 4; P.O. Box 1, Olyphant, PA 18447-0001; Telephone: 570-383-7661; Fax: 570-383-7466; Email: info@grsnp.org

#### USPS Issues Postage Stamp to Honor Coal Miners

By Elaine LaGreca

Once upon a time men boarded ships and left their native countries to migrate to the United States seeking a better life. Sometimes their wives and children traveled with them, while others followed months or years later. Many of these men settled where they could find work, often where family members migrating before them had already settled. Many found jobs in Northeast Pennsylvania working in the anthracite coal mines. Little did these men and women know that their children, grandchildren and great grandchildren would someday experience a need (or desire) to understand the paths their ancestors traveled.

It is usually when a person grows older that they come to realize the hard lives these men and women experienced. There was a road traveled by nine persons who had banded together to achieve a long overdue recognition of their ancestors – men who traveled or still travel down a road each day to a place where sunshine has never reached in order to mine the coal that once fueled the Industrial Revolution in this nation.

In 2000, an interest to learn about coal mining, coal miners and the life of a coal miner brought several people to the Yahoo Anthracite History Group. Eric McKeever, Diana Gately, Elaine LaGreca, Rhea Malone, Carol McNulty, Linda Scott, Tom Dempsey, Clem Page and Paul Paslawsky, to name a few, joined to form the Coal Miner's Commemorative Postage Stamp Committee, later to be renamed the COALition for a Coal Miner's Commemorative Postage Stamp. It was learned that many before this group had worked for the issuance by the United States Postal Service (USPS) of a commemorative postage stamp for coal miners without success. One such person



The poster of the stamp collection was signed by those who attended the ceremony at the Wilkes-Barre post office.

was John Vengien who began a letter writing campaign to the Citizen's Advisory Stamp Committee (CASC) in 1986. Others continued to join the COALition's struggle including Diane Rooney, Ed Linkus, Frank McCarthy and Joe Calombara.

Most of the committee members had never met in person, had never heard each other's voices; nevertheless they communicated via their computers from New York, Maryland, Pennsylvania, California and other states. The goal was to request those who would be emailed to send letters of support of a Coal Miner's Commemorative Postage Stamp to the Citizen's Advisory Stamp Committee. It was imperative to show the CASC that the coal miner's stamp was indeed of "national interest".

With the tools provided at www.petitiononline.com, a petition was drafted by the Coal Miner's Commemorative Stamp Committee and was posted online at http://petitiononline.com/stamp/petition.html Members of the committee sat at their keyboards and emailed the petition URL to their families and friends, soliciting their signatures and requesting

(Continued on Page 4)

#### USPS Issues Postage Stamp to Honor Coal Miners By Elaine LaGreca (Continued from Front Page)

they forward it to others. Within hours of the posting, the URL for the petition was linked from sites that included genealogical lists and coal club discussion sites.

Emails lists of federal and state officials in all 50 states were compiled. Support was received for this endeavor from places such as Hawaii and New York where coal had never been mined but where the ancestors of coal miners now lived and were members of those states' senates and houses of representatives.

By 2003, on the Federal level, five senators and five representatives had written letters of support to the CASC. In addition, in the  $107^{\text{th}}$  Congress, resolutions calling for the coal miner's stamp to be issued were introduced in the House and Senate. Unfortunately, the resolutions died in committee. Cabinet members Labor Secretary Elaine Chao and Education Secretary Rod Paige had also written letters of support.

At the state level more than 260 senators and representatives from 47 states had written letters of support to the CASC. Beyond these letters of support, legislatures in 11 states had passed resolutions of support and had forwarded those resolutions to the CASC.

The online petition that had been uploaded netted more than 13,000 signatures. Paper petitions circulated at outdoor events, church fairs and at many church services netted more than 75,000 signatures. Emails were sent to state historical societies, tourism bureaus, coal organizations and newspapers. Much of the support was from Northeast Pennsylvania, but through the power of the Internet, many other pockets of support from other states were sought and found.

The COALition for a Coal Miner's Commemorative Postage Stamp established its own website at www.coalminerstamp.com by its Webmaster, Jim Skinner. Visitors could print petitions to circulate and sample letters to send to the CASC, learn about upcoming events and read

recent press releases.

Another way the COALition built awareness and support was through other coal mining related website links. The links were a great starting point to explore coal mining history and regional history in a number of states. Anyone could see which states had sent letters of support, with a list of the names of those sending letters of support to CASC under each state's name. Resolutions passed in states could now be uploaded for all to read.

The Anthracite Living History Group had formed and supported the effort of the COALition. Members visited Pennsylvania fairs, festivals and museums with both current and retired miners, boys dressed as breaker boys, an amazing collection of coal mining artifacts such as lamps and tools, and manikins dressed in period costumes.

The group provided coal history education through conversations with miners and explanations of the uses of the artifacts. Among other events, the group appeared at the Wilkes-Barre River Fest in June 2003 and the No. 9 Mine in Lansford, Carbon County, in August 2003. The late Joe Keating was the organizer of the group with Eric Bella, Bill Best, John Dziak, Bill Hastie, Megan Hastie, Robert Hughes, Carl Orechovshy, Zach Petrosky, Linda Scott and Robert Wolensky.



Circa 2003 Left to Right: Joe Keating, Len Sarnick, Linda Scott, Representative Hasay, Durwood Smith and John Vengien. Picture courtesy of Linda Scott.

In its efforts the COALition encountered others working toward the same goal. A. J. Gianforcaro, a retired miner collected more than

(Continued on Page 5)

5,000 signatures at the Lackawanna Coal Mine Tour in Scranton. Petition signatures were collected at stores, offices, factories and at the post offices in Pennsylvania. Nancy Boyer, Nancy Goldsmith, Jean Leach, Leonard Sarnick and John and Julia Vengien were others who joined the COALition to help the Coal Miner's Commemorative Postage Stamp effort.

John Vengien had been writing letters to the CASC since 1986. In 2002, an Associated Press story that included an interview with John ran in many cities across the country including Albuquerque, Corpus Christi, LasVegas, Macon, GA, Miami, Tampa and Washington DC.



Then it began to happen. Time marched on, talk of a stamp stopped and no stamp was issued. In December 2003, Rhea Malone passed away. The loss of Rhea had a severe impact on the COALition. Without Rhea, the COALition could not maintain the enthusiasm and organization that she had supplied the movement.

In March 2004, Len Sarnick passed away followed by Joe Keating in October 2006. But it was the passing in 2009 of John Vengien who worked on the effort for 25 years that deeply affected the remaining members of the group.

John saw the movement come so close to success and then come to a stop. Although John never owned a computer, he was confident that what the COALition was able to accomplish using the Internet, the stamp would come. The CASC actually did acknowledge that coal mining was of "national interest" before his passing, but John did not see the day that the Coal Miner's Commemorative Postage Stamp would be issued.

Then it happened...Word was received that on August 8, 2013, the USPS would release a set of Forever Stamps. The set would be called "Made in America – Building a Nation" and the set would include a stamp of a coal miner. The collection can be seen at http://uspsstamps.tumblr.com/page/6

The unveiling of the collection took place on Thursday, August 8 in Washington DC. There was an unveiling ceremony on Friday, August 9, at the post office in Wilkes-Barre, when the set became available for sale outside of Washington.

The ceremony, which was sponsored by Representative Eddie Day Pashinski, was very well attended and held in a tent outside the post office. Because of the larger than expected number of RSVPs received by Rep. Pashinski's office, it was clear that the post office could not accommodate the number of attendees, thus the necessity of a tent.

Speeches were given by many of the area's elected officials. Afterwards attendees were invited inside the post office to purchase the stamp collection, have a purchased stamp hand cancelled with the date and place of "the second day of official sale" and a meet and greet the speakers.



Former U.S. Congressman Paul Kanjorski, Linda Scott, Julia Vengien, Elaine LaGreca and PA House of Representative Eddie Day Pashinski.

During this ceremony, I hoped to find out how the stamp finally came to be issued. I had heard nothing either online or in any online groups about any efforts to continue the push for a Coal Miner's Commemorative Postage Stamp. My memory was jogged as speakers said that back in 2003 when the CASC acknowledged that a coal miner's stamp "was of national interest", the COALition received word that there would be a

(Continued on Page 6)

#### USPS Issues Postage Stamp to Honor Coal Miners

By Elaine LaGreca (Continued fom Page 5)

collection of four stamps entitled "Working America" that would include other occupations, as well as a coal miner's stamp. It appears that the wheels of many projects originating in Washington move at a slower pace than most would like and do change as time goes by.

While at the ceremony, I realized that other COALition members had moved along and could either not be reached or had passed. So many others I didn't know who had worked so hard and for so long for this stamp were not at the ceremony to see the realization of their efforts.

What was still there, however, was the essence of people who are proud of their coal mining ancestors and those who worked toward the issuance of a stamp to acknowledge the brave and hard work done in the mines by so many. One hopes that they are aware of the stamp's release and are celebrating with many others who worked hard to see the stamp become a reality.

August 9, 2013 was a glorious day for the memories of-miners who got up each day and worked hard and long in the mines to support their families. It was also a special day for their descendants, the people who began the effort many years ago and were there to see their efforts become a reality.

The Coal Miner's Commemorative Postage Stamp is not only a visual reminder of those who played a major role in the country's industrial development, but also a permanent reminder of what fueled the growth of the United States. Most of all, just as others did, coal miners taught and continue to teach the ethics needed to Build a Nation.

Left to Right: Bill Hastie, Bill Best and Phil Voystock with the coal miner's stamp

that is part of the Made in America -Building a Nation Collection.

#### **Blakely Mine Memorial**

In October 2016, Silvia Passeri, Peckville, initiated a community effort to have erected a monument in memory of coal miners from the Mid-Valley area. Here are the materials that we have on this project:

Letter of October 21, 2016:

#### COAL MINERS REMEMBERED 1234 MAIN STREET PECKVILLE, PA. 18452

**OCTOBER 21, 2016** 

**DEAR DR. POWELL:** 

My name is Silvia Passeri. I am from Peckville. I am erecting a monument to the coal miners from the greater Mid-Valley area. Parise Monuments are going to erect the statue.

I asked Jeffrey if there was anyone from Carbondale that would be interested in joining up with us. He told me to contact you.

We would appreciate any help you can give us.

I have attached some information for you.

Thank you,

Silvia Passeri

Here is the flyer from the committee sponsoring this monument:

#### COAL MINERS REMEMBERED

1234 Main Street · Peckville, PA 18452



FOUNDER

SILVIA M. PASSERI

SECRETARY-TREASURER

Mrs. Jones was preparing dinner for her family.

There was a knock on the door.

Two miners were standing there.

One asked, "Are you the widow Jones?"

Confused and frightened she replied,

"No, my husband is at work in the mines".

"Not anymore" said the miner, "We just dropped him off on your porch."

PATTI GRANDE RIEDER, ESQ.

. .

MARY BETH HOPKINS

MICHELE NEGVESKY GIBSON

COMMITTEE MEMBERS

JUNE PRESCHUITTI

JOSEPH ERCOLANI, SR.

JOSEPH ERCOLANI, DR.

ELAINE SANTARELLI

MAURI KELLY

MAGGIE LUND

JUDY KORJESKI

FRANK LESNEFSKY

NORINA LYNOTT

JOEY CASTELLANI

JACK CASTELLANI

GEORGE SAFKO

Dear Friends,

This is only one story among many of the horrors that coal miners suffered. They worked in unspeakable working conditions. Many lives were cut short with lung cancer.

We owe a debt of gratitude to these coal miners whose sacrifices enriched the lives of everyone. While it is not in our power to change the course of history, what we can do is honor these brave men.

It is our desire to erect a monument in honor of our miners from Blakely. We can have a place to reflect, pray and think of them.

A granite monument will be placed (venue to be announced) in Blakely Borough. We are asking for donations to facilitate this project.

On another attached monument, we plan to engrave names individually of your family member who worked in the mines, in the Greater Blakely Borough area.

For any inquires, call 570-383-2879.

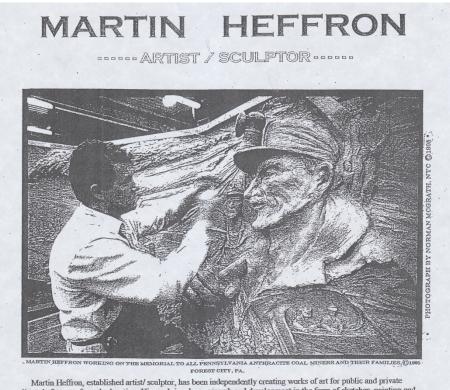
Thank You,

Committee to Remember Coal Miners

Tax ID Number: 81-28339247

#### Forest City Memorial to All Pennsylvania Anthracite Coal Miners and Their Families

A memorial to all Pennsylvania anthracite coal miners and their families stands in Forest City, PA. This memorial was created by Martin Heffron, about whom the following material was presented to us on May 31, 2017 by Peggy Brager of the Forest City Historical Society.

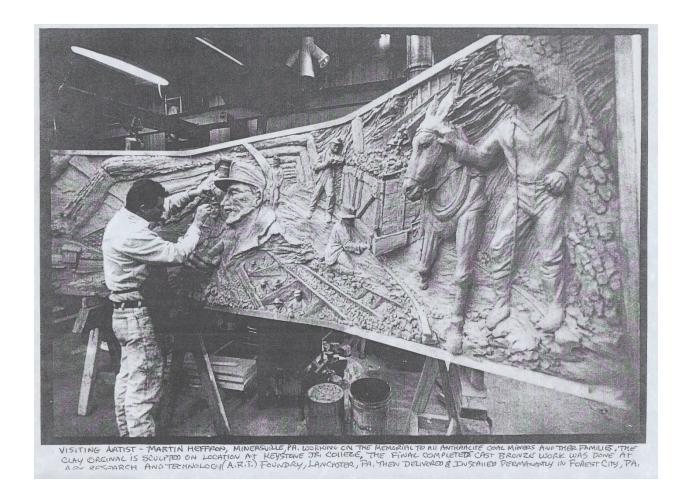


Martin Heffron, established artist/ sculptor, has been independently creating works of art for public and private clients before any formal education. His work involves research and development in the form of sketches, painting and written notes, often culminating with sculptural expressions in clay, plaster, resins, wood or metal. While completing numerous religious and community related projects, he studied ceramic, bronze and iron sculpture and casting with William Teersteeg and Cliff Prokop earning an Associates degree in fine art from Keystone college, Pennsylvania. Studying under Thomas Lacagnina, wood sculptor and William Underhill, sculptor, Mr. Heffron attained Bachelors of fine arts and Education degree from Alfred University of New York. He is a certified teacher in the state of Pennsylvania and has worked with children and adults from all walks of life, sharing ways to explore and express creative potentials he believes we all possess. He has earned his Masters of Arts and Transpersonal studies degree from Atlantic University, Virginia Beach, Virginia. The program involved a concentration in visual arts, creativity and

Mr. Heffron's inspiration—the lifeblood of his desire to create-is tied to family, local heritage, spirituality and a solid work ethic. Born and raised in the coal region of Northeast Pennsylvania, Mr. Heffron grew up learning the solid values and determination that he exhibits in his work. Widely recognized for the dramatically inspiring creation of the Memorial to All Pennsylvania Anthracite coal ininers and their Families, Mr. Heffron's 4'x 17' cast bronze high-relief sculpture is hailed as the largest, most comprehensive memorial of its kind in the world. An accomplished artist, his artwork has been featured on WNEP Channel 16's On the Pennsylvania Road with Mike Stevens, and WBRE TV 28's news program. He is a graduate of the Military Police Academy, Fort McClellan, Alabama and while enlisted was commissioned by the Disabled American Veteran's association to travel to the Pentagon where he met with, sketched, photographed, and eventually sculpted, east and produced the over life size bronze bust of the Supreme Allied Commander of NATO, General George Joulwan, The now retired four-star general of the united states Army.

A direct genial speaker, Mr. Heffron has lectured and exhibited at the Association of Research and Enlightenment, Atlantic University, Virginia Beach, Virginia; the Fostic Nelson Gallery in the southern tier of New York State; Gallery on the Square, Millersburg, Pennsylvania, the Anthracite Heritage Museum, Scranton, Pennsylvania, the Everhart Museum, Tamaqua, Pennsylvania and on numerous occasions The Schuylkill County Council for the Arts located at the Yeungling mansion, Pottsville, Pennsylvania Commissioned work for private collections and public display are respectfully located across this country, Toronto, Canada and Warsaw, Poland.

.Mr. Heffron's journey as an artist' sculptor has led him back home to Minersville, Pennsylvania, where he lives, teaching as a Specialized Carpentry instructor at the State Correctional Institution at Mahanoy, Frackville, PA.



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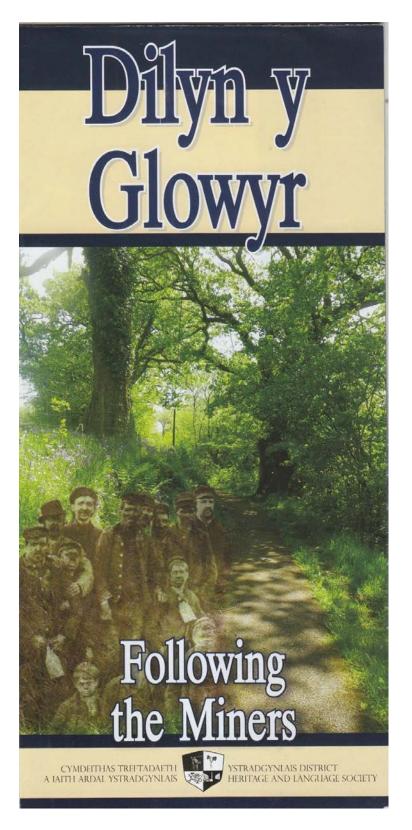
#### The Coal Mines of South Wales

From the article titled "'Dank, dark, dirt, damp, danger, death.' Reign of Old King Coal is over" by Graham Powell in the August 1994 issue of *Y Drych*, pp. 6-7, we have learned the following about the coal mines of South Wales:

- The only deep coal mine left in Wales is in North Wales
- The South Wales coalfield was located in the seven valleys of South Wales (see map below), where the industry started in the late eighteenth century with the discovery of coal, ironstone, and limestone in close proximity in Merthyr Tydfil, Blaenavon, and Ebbw Vale.
- South Wales steam coal had the highest calorific content of any coal. There were Royal Navy coaling stations at Gibraltar, Aden, Trincomalee, Hong Kong, Singapore, Falkland Islands, Bermuda, and Cape Town.

- Coal was found up to 900 yards below an area of land between Pontypool in the east and Maesteg in the west, stretching about 16 miles south just into Swansea Bay—600 square miles, separated into seven steep gorges, running north to south, the southern ends of all seven valleys open to the sea; at the peak of the industry, half the coal was exported. The coal seams were as narrow as two feet thick to a maximum of nine feet.
- The miners of the South Wales rectangle mined 8 million tons in 1855; in 1955, at the beginning of World War I, they mined 57 million tons (the peak output of the South Wales coalfield); at the end of World War II, they mined 20 million tons; today (1994) nothing.
- In 1913, 620 mines employed 233,000 men and boys; in 1945, there were 42 mines with 31,000 miners; today, neither mines nor miners. For those miners, "Life was dank, dark, and damp, filled with dirt, danger and death."
- In 1913, there were over 17,500 horses in the South Wales mines (on average 30 per mine); in 1974 there were still nearly 150 pit ponies in the South Wales coalfield.
- For further reference, see *Welsh Coal Mines* by Dr. W. Gerwyn Thomas, National Museum of Wales, 1986.

Given below is a copy of the flyer titled "Following the Miners", which is about the anthracite mining operations in an around Ystradgnylais:



Ar un adeg, roedd cwm Tawe uchaf yn ganolbwynt prysur i ddiwydiant. Saif ar gyrion gogleddol maes glo De Cymru, lle cafwyd o hyd i haenau cyfoethog o lo, mwyn haearn a chalchfaen yn ystod y 19eg a'r 20fed ganrif.

Erbyn 1896, roedd glofeydd ardal Ystradgynlais yn cyflogi dros 1,000 o lowyr. Cododd y rhif i dros 2,250 erbyn 1908, ac roedd dros 2,000 o lowyr yn yr ardal 30 mlynedd yn ddiweddarach. Pan gaewyd glofeydd olaf yr ardal tua 1967, roedd pyllau megis *Abercrave* a Yniscedwyn yn dal i gyflogi dros 450 o ddynion yr un.

Situated at the northern edge of the South Wales coalfield, where abundant sources of coal, iron ore and limestone were to be found, the upper Swansea valley was a hive of industry during the 19th and 20th centuries.

By 1896, collieries around Ystradgynlais employed over 1,000 men. This number rose during the 20th century, with over 2,250 men working in local pits by 1908. 30 years later there were still over 2,000 colliers in the area and even at closure in 1967, local mines, such as Abercrave and Yniscedwyn still employed 450 men each.





Prin iawn yw'r dystiolaeth heddiw o'r glofeydd a drawsnewidiodd yr ardal. Mae'r hen weithfeydd wedi cael eu dymchwel a'u tomenni swbriel nodweddiadol wedi cael eu hysgubo ymaith.

Er i'r diwydiant glo ddod â gwaith a masnach i'r ardal, cofir amdano fel diwydiant peryglus oedd wedi creithio'r dirwedd yn ogystal â bywydau llawer o'r rhai oedd yn dibynnu arno i ennill eu bywoliaeth.

Precious little evidence survives of the collieries that transformed the local landscape for over a century. Most colliery buildings have been swept away and their pyramidical spoil tips have been levelled.

Although mining brought employment and industry to the area, it will always be remembered as a dangerous and difficult industry which scarred the landscape and many of those who worked in it.

## Yng nghamre'r glowyr

Ychydig iawn o olion sydd yn weddill erbyn hyn i ddangos pa mor ddylanwadol oedd y diwydiant glo pan oedd ar ei hanterth. Wrth gerdded llwybrau'r fro, dewch o hyd i ambell hen domen sbwriel glo, neu

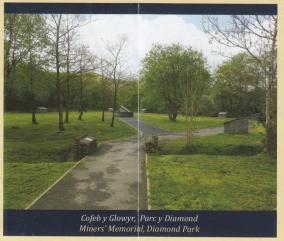
ambell i adfail. Bellach, mae'r hen dramffyrdd a'r hen reilffyrdd wedi cael eu troi yn llwybrau, sy'n rhoi cyfle i gerddwyr a seiclwyr dilyn yng nghamre'r gwŷr a fu unwaith yn gweithio ym mhyllau glo'r ardal.

Mae'r rhwydwaith o lwybrau yn rhedeg ar hyd dwy ochr y cwm, o Ystradgynlais i Abercraf, gan gynnig golygfeydd ardderchog o dirwedd ysblennydd Cwmtawe uchaf.

Yn ymyl Llwybr Glan yr Afon, ar safle Glofa'r *Diamond*, mae aelodau Cymdeithas Treftadaeth ac laith Ardal Ystradgynlais wedi creu cofeb i'r glowyr. Yma, cewch flas ar hanes diwydiant glo'r ardal hon

# In miners' footsteps

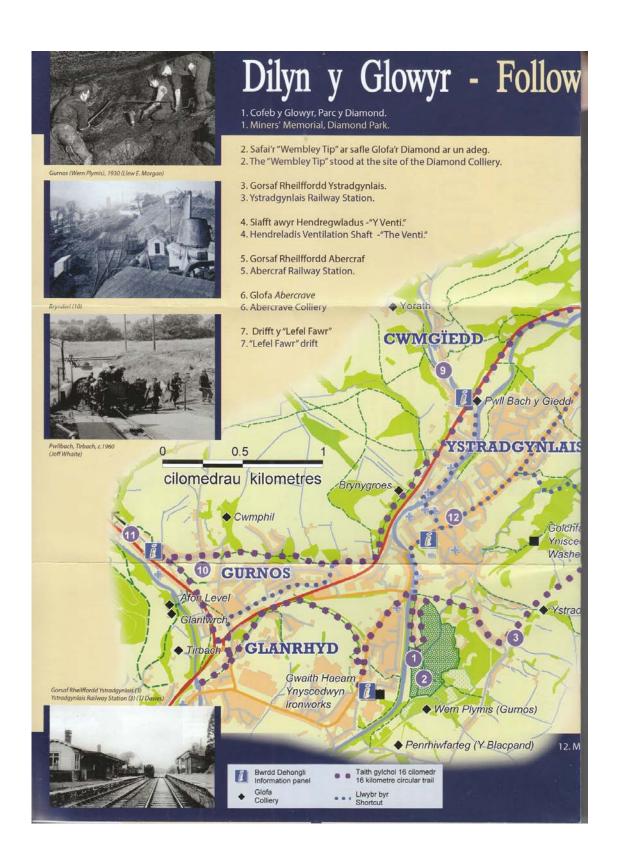
A network of trails which run from Ystradgynlais to Abercraf, along both sides of the valley, offer stunning views of the upper Swansea valley landscape.

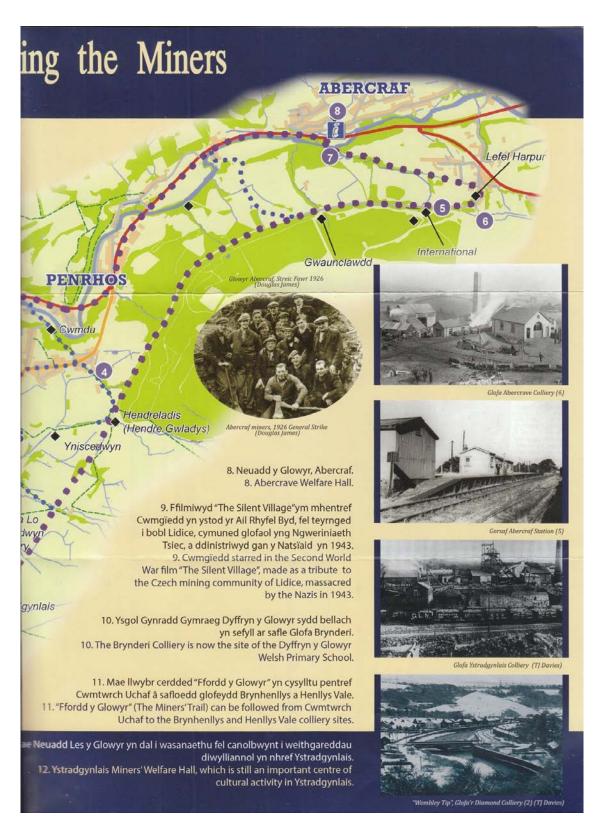


There is little left in the local landscape to recall the days when "coal was king" here. Exploring local trails gives occasional glimpses of the remains of old spoil tips, and fragments of colliery buildings. Old tramways and railways have been turned into trails which let the walker or cyclist follow in the footsteps of the men who once worked in local collieries.

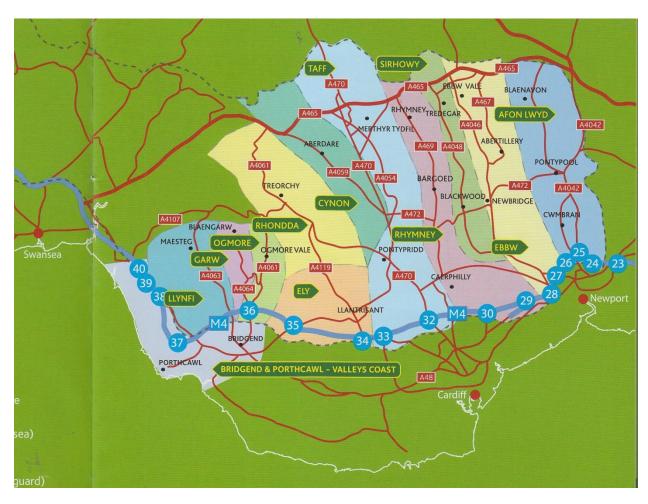
At the Riverside Walk in the Diamond Park, the site of the former Diamond Colliery, the Ystradgynlais District Heritage & Language Society has erected a memorial to the miners, where you can learn about the mining heritage of the district.





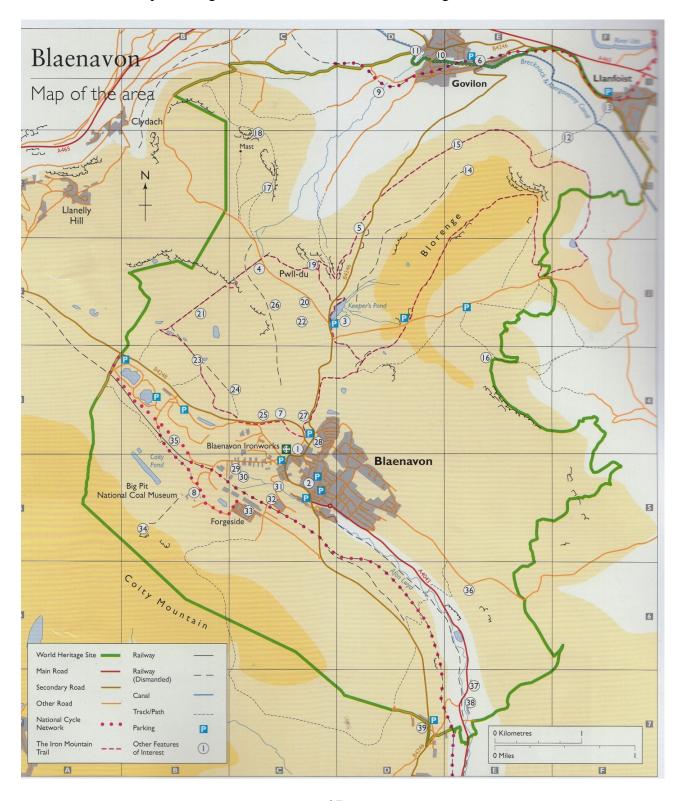


Shown below is a map showing the seven valleys of the South Wales coalfield. This map is reproduced here from page 29 of *The Valleys*, a visitor's guide that was funded and produced by The Valleys Consortium consisting of Blaenau Gwent CBC, Bridgend CBC, Caerphilly CBC, Methyr Tydfil CBC, Rhondda Cynon Taf CBC, and Torfaen CBC. This guide was used by the author during a tour of these coalfields in June-July, 2017.



On July 2, 2017, the author visited the Big Pit National Coal Museum and the Blaenavon Ironworks (one of the best preserved 18<sup>th</sup>-century ironworks to be found anywhere in the world), both of which are located at the Blaenavon World Heritage Site in South Wales. At Big Pit, which employed 1,300 workers in its heyday, the author went on the very informative—and world famous—underground tour, which was conducted by a former coal miner who worked at Big Pit. Among a great many very interesting facts that the author learned on the tour, he learned that the Welsh did not use mules underground; rather they used "pit ponies."

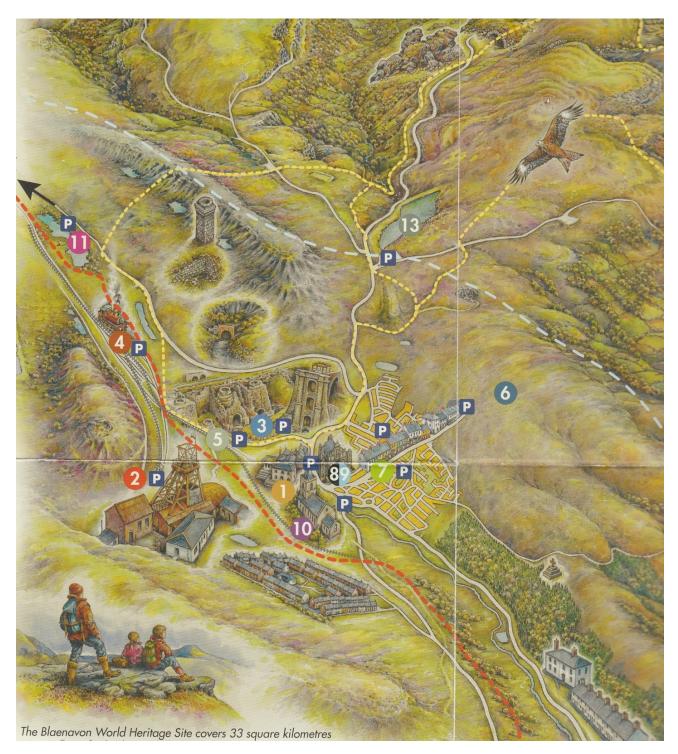
Given below is a map showing the entire Blaenavon World Heritage Site in South Wales:



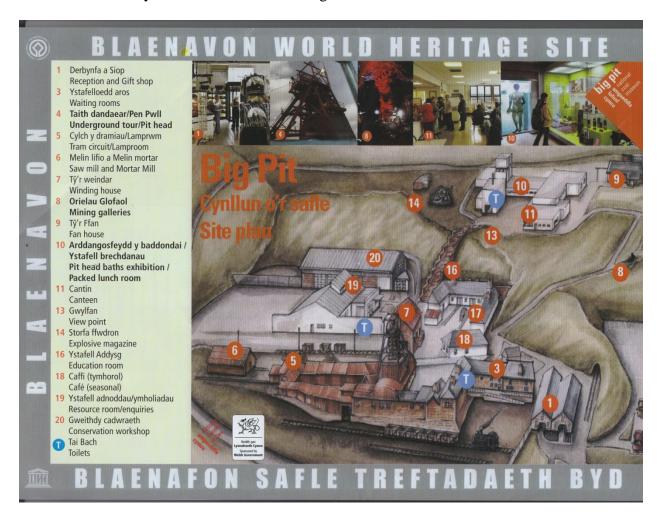
Given below is an overall view of the visitor's map of the Blaenavon World Heritage Site. On this map, at "2" is the Big Pit National Coal Museum; at "3" is the Blaenavon Ironworks.



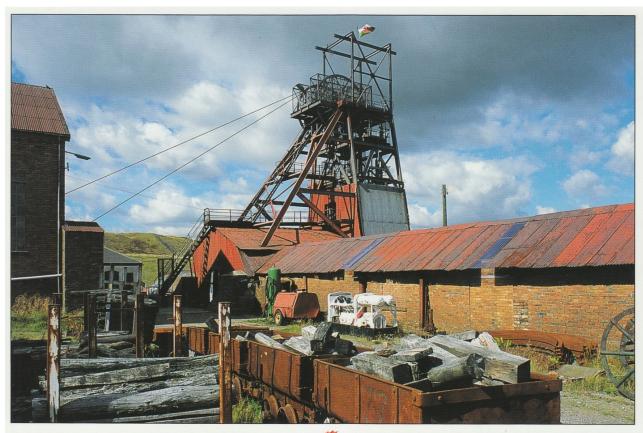
Given below is a detail of the visitor's map of the Blaenavon World Heritage Site. On this map, at "2" is the Big Pit National Coal Museum; at "3" is the Blaenavon Ironworks.



Shown below is a flyer that shows the entire Big Pit site:



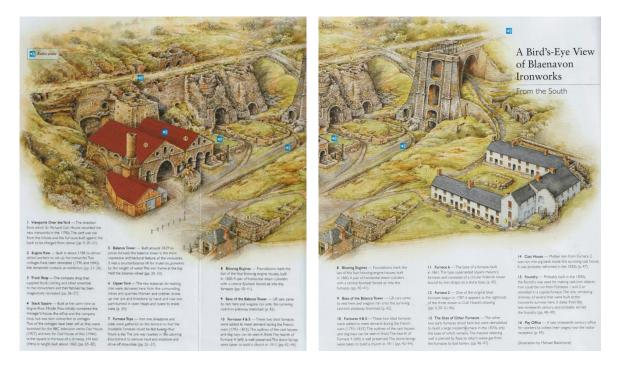
Shown below is a post card view of one of the primary buildings at the Big Pit National Coal Museum:



Y Pwll Mawr : Amgueddfa Lofaol Genedlaethol Cymru 💘

Big Pit: The National Mining Museum of Wales

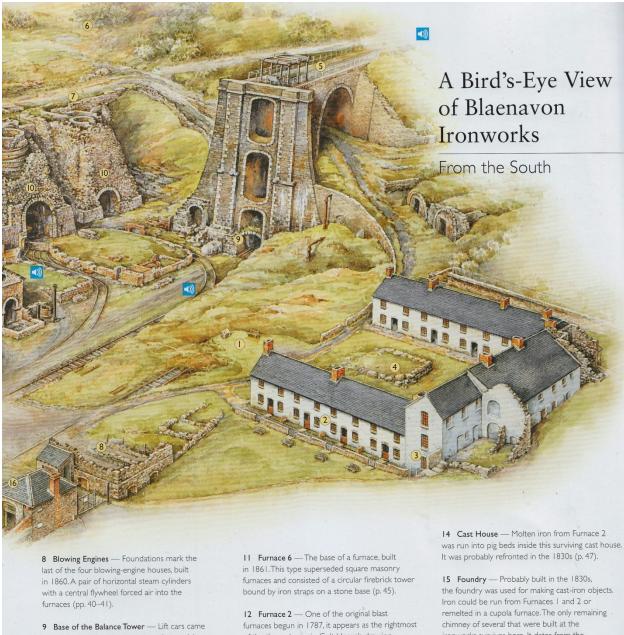
#### Here are two details of a map of the Blaenavon Ironworks:



#### Left side of map shown above:



## Right side of map shown above:



- to rest here and wagons ran onto the surviving cast-iron plateway tramroad (p. 42).
- 10 Furnaces 4 & 5 These two blast furnaces were added to meet demand during the French wars (1793–1815). The outlines of the cast houses and slag bays can be seen in front. The hearth of Furnace 4 (left) is well preserved. The stone facings were taken to build a church in 1911 (pp. 42-44).
- of the three shown in Colt Hoare's drawing (pp. 4, 20-21, 46).
- 13 The Sites of Other Furnaces The other two early furnaces stood here but were demolished to build a large modern furnace in the 1870s, only the base of which remains. The massive retaining wall is pierced by flues to return waste gas from the furnaces to fuel boilers (pp. 46-47).
- ironworks survives here. It dates from the late nineteenth century and probably served the foundry (pp. 48-49).
- 16 Pay Office A late nineteenth-century office for workers to collect their wages, now the visitor reception (p. 49).

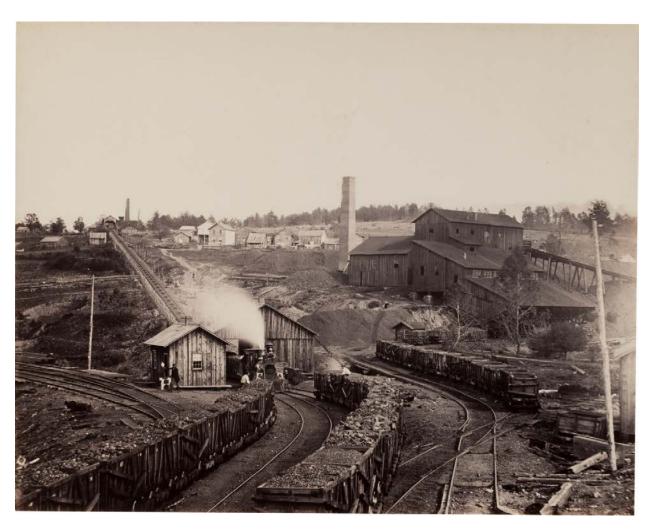
(Illustration by Michael Blackmore)

1724

## In the Caboose

# **Additions for Volume III:**

1. In 1859, the D&H Gravity Railroad was extended southward to Olyphant. Here is a very high quality electronic copy of the Thomas H. Johnson photograph of Plane No. 23 (Plane G) that was taken in 1860. This is one of a series of views of the Delaware and Hudson Canal and Gravity Railroad that were taken by Johnson. On April 7, 1998, at Sotheby's in New York, large-format albumen prints of 32 of these Johnson photographs were sold for \$66,300. Here is the view of Plane G:



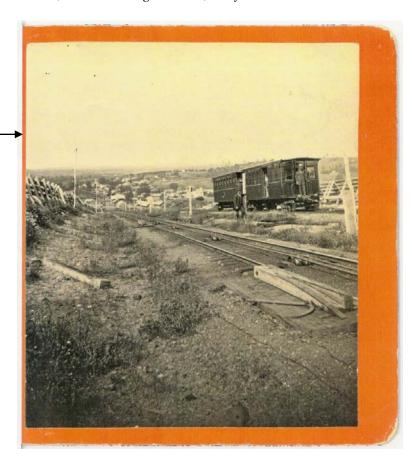
#### **Additions for Volume IV:**

1. The movement of coal and freight cars and passenger coaches down Planes 9, 10, 11, and 12 in the 1868 configuration of the Gravity Railroad:

In the 1868 configuration of the D&H Gravity Railroad, there were four planes, between Farview and Waymart, down which all coal and freight cars and passenger coaches on the way to Honesdale had to descend: Planes 9, 10, 11, and 12. The steep grade on those four planes made it necessary to lower the cars down those planes by means of a cable, the brakes on the cars themselves not being adequate to slow the movement of cars as they moved down those planes.

Hensel, No. 1117: View down No. 18 Plane, with Passenger Train; Waymart in the Distance

Hensel, No. 1117: Plane No. 12 is in the foreground. Note the cables in the plane for lowering coal and freight cars and passenger coaches down the plane to Waymart. In the background, two Gravity passenger coaches ascend Plane No. 18 from Waymart.

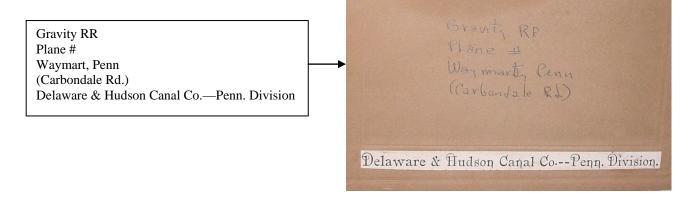


# 2. Photograph of Plane No. 15

The photograph shown below was sold on E-Bay on August 5, 2016.

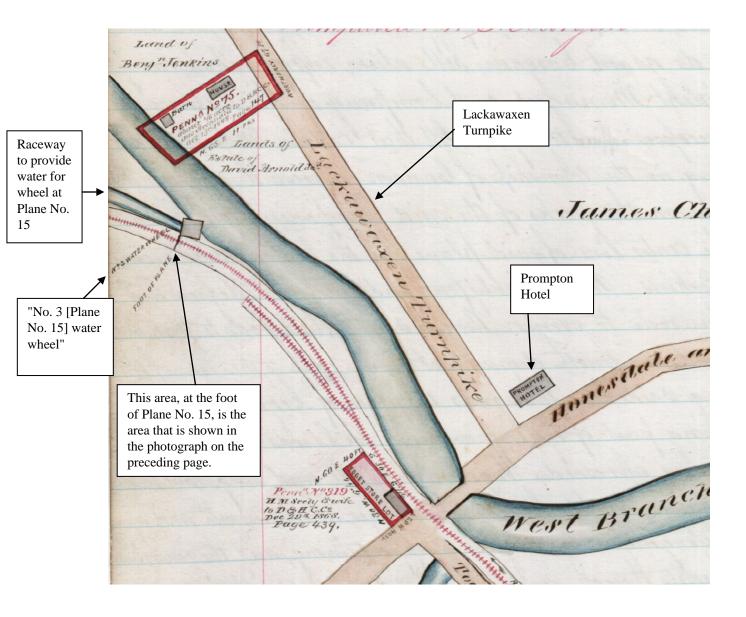


The back of the photograph is shown below on the right.



It is our contention that this is a very rare photograph that was taken at the foot of Plane No. 15 in Prompton. The map on the following page supports that contention.

The following map of Prompton and environs is given in the *D&H Deeds PA* on the map on page 86 that illustrates the deed, pp. 85-86 between George Rix and wife and The Delaware and Hudson Canal Company, dated December 27, 1842.



# 3. Pennsylvania Coal Company Gravity Railroad

# A. Minutes of the Meetings of the Board of Directors of the Pennsylvania Coal Company

The minutes of the meetings of the Board of Directors of the Pennsylvania Coal Company are in Manuscript Group 282 in the Pennsylvania State Archives, Harrisburg, PA.

## B. Maps of the Pennsylvania Coal Company's Gravity Railroad

In the DeNaples Collection, Dunmore, PA, there is a volume containing 95 maps, 25" x 17", of the Gravity Railroad of the Pennsylvania Coal Company. Those maps were drawn circa 1866, with some data on the maps going back to 1850 and some going forward to 1897.

In 2002, the Carbondale Historical Society organized and carried to a successful conclusion a project to have these extraordinary maps professionally photographed and archived. Here are the introductory pages of the electronic copies of those maps:

# Maps Pennsylvania Coal Company Gravity Railroad (1850-1885)

Presented here are 95 maps (25" x 17", scale 1 inch = 200 feet) of the Pennsylvania Coal Company's Gravity Railroad from Port Griffith/Pittston to Hawley, PA. These maps, which date from about 1866 (with some data on the maps going back to 1850 and some going forward to 1897), are the property of a private collector in Dunmore, PA, who has graciously made them available for this archival storage project. These maps are the only professionally drawn maps of this rail line that are known to exist.

This project, organized by the Carbondale Historical Society, was made possible by a grant from the Lackawanna County Commissioners' Arts to the People Program and the Pennsylvania Council on the Arts.

The first step in this archival project was to have the maps professionally photographed by Professional Photographic Services (111-117 Scott Street, Wilkes-Barre, PA 18702. 570-824-1600, 800-834-9001), who produced high quality 4" x 5" negatives of each map.

These negatives were then scanned onto a Kodak Photo CD by The Camera Shop, Inc., Visual Sound Company (485 Parkway South, Broomall, PA 19008. 610-544-8700).

Copies of the Kodak Photo CD of these Pennsylvania Gravity Railroad maps were produced for the Lackawanna Historical Society, the Wayne County Historical Society, the Waymart Area Historical Society, the Carbondale Historical Society, and the owner of the original copy of this map book.

Public presentations about this archival project were presented by the Carbondale Historical Society at the Lackawanna Historical Society, the Wayne County Historical Society, and the Carbondale Historical Society in 2002.

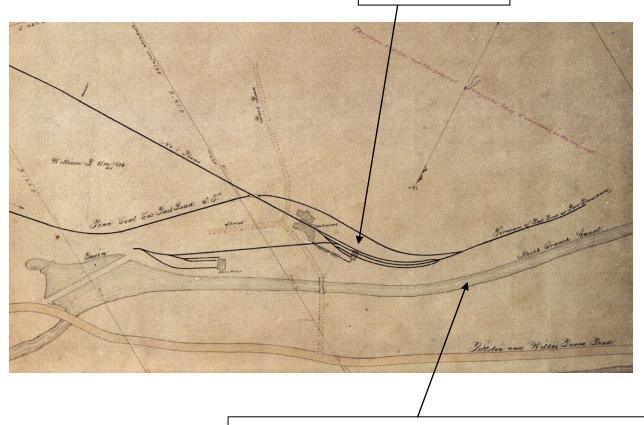
Special thanks to Dr. Rodney D. Brown, Waymart, PA, for his technical advice and guidance in the successful completion of this archival project.

S. Robert Powell Executive Director Carbondale Historical Society Third Floor, Carbondale City Hall Carbondale, PA 18407-2356 570-282-0385 May 28, 2002

Shown below are nine details from those maps.

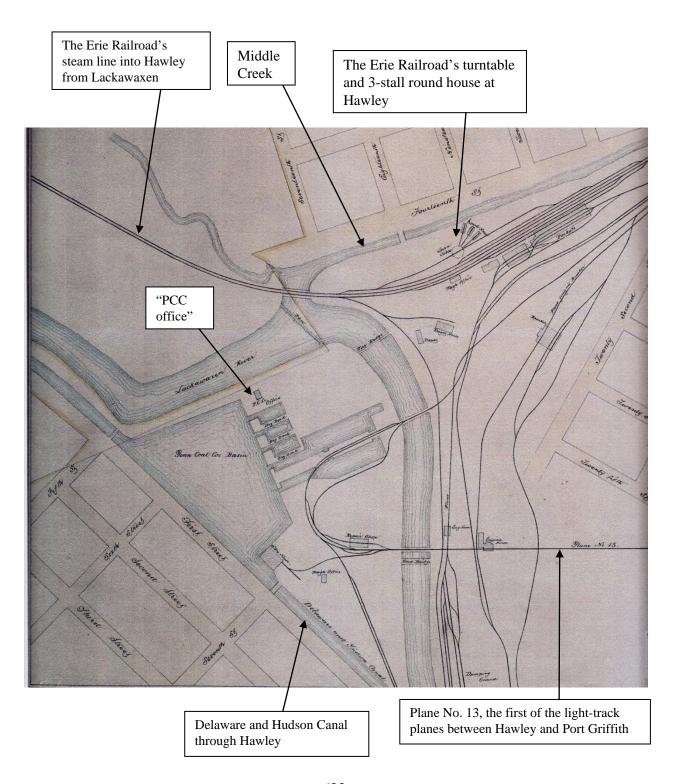
Plane No. 1 area: the starting point of the Pennsylvania Coal Company's Gravity Railroad from Port Blanchard to Hawley

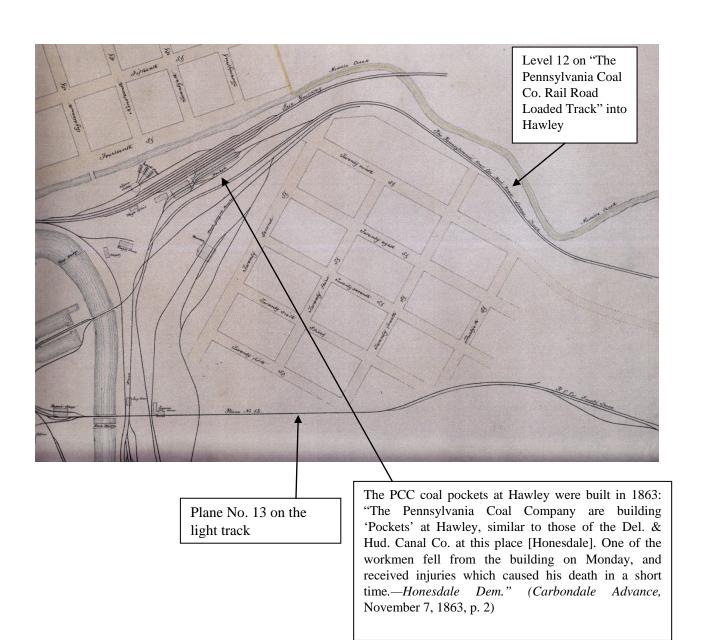
The foot of Plane No. 1 on the PCC Gravity Railroad at Port Griffith on the Susquehanna River



The North Branch Canal at Port Griffith, by means of which PCC rail and North Branch Canal shipments could be interfaced.

Hawley, PA: the terminus of the Pennsylvania Coal Company's Gravity Railroad



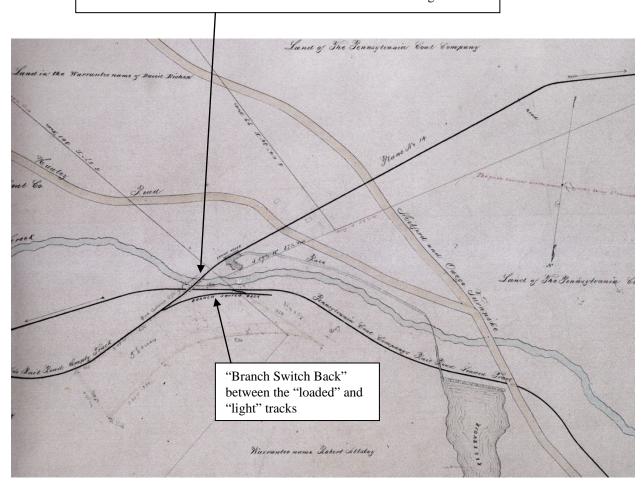


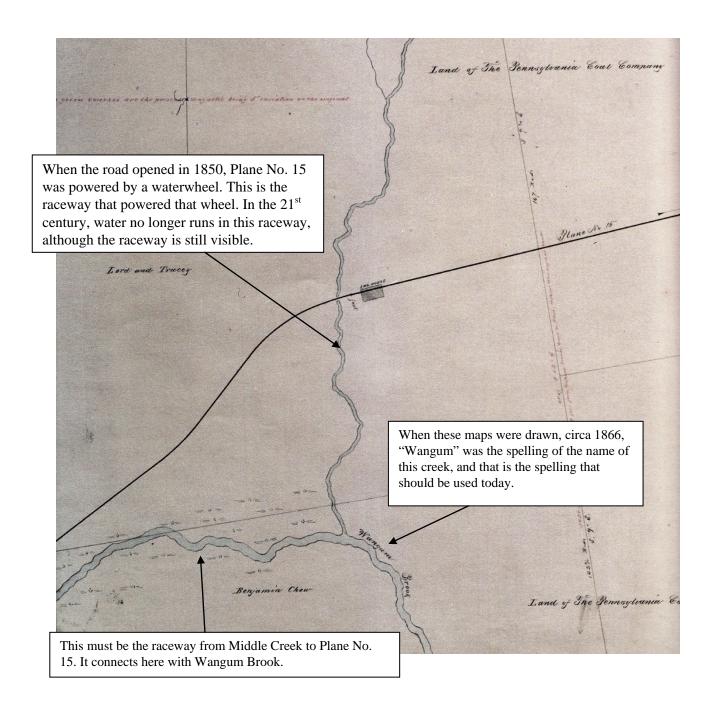
#### Water Power:

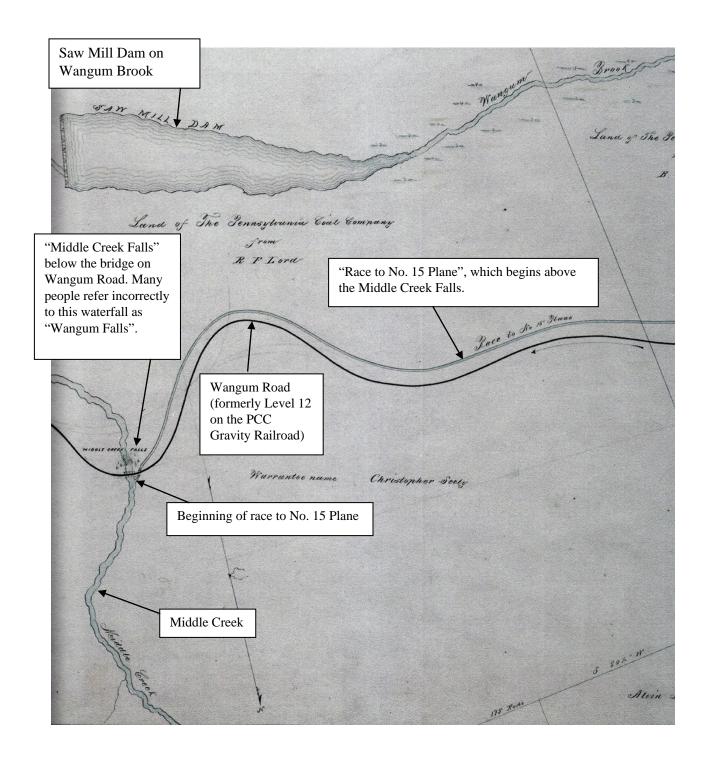
Planes 13, 14, and 15 were originally powered by water. In M. J. McAndrew, *History of Hawley* (Scranton, 1927), pp. 30, 79, we read: "A dam was built in Middle Creek at nearly the west end of 'Marble Hill'. A little canal was constructed from this dam to the foot of Number 13 where a coal pile existed. This water wheel ran the plane on which coal from the storage dumps along the Lackawaxen were hoisted. At Number 14 the loaded track passed under the light track two miles from Hawley. There was another water wheel at Number 14 in the early days and it was fed by a canal from Middle Creek. The wheel runners were Charles Hand and William Hand. A long wooden aqueduct was built at Wangum Falls. This structure also took water from a dam in Middle Creek above the Falls and carried it across the valley to Number 15 on the light track where it drove the big wheel which hoisted the cars, and which, after fifteen or twenty years of service was replaced by a steam engine. This water wheel was first run by Jacob Ames and after him John Ames and Ezra Swingle."

Plane No. 14 area

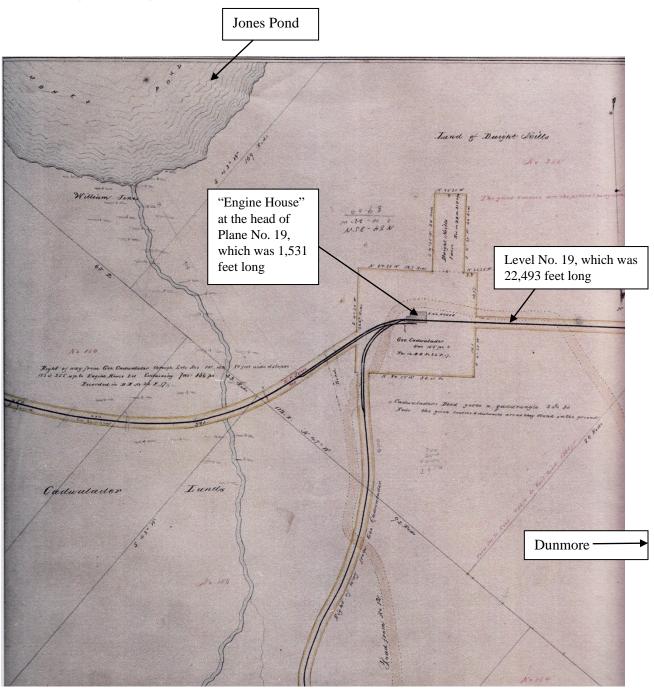
One of the locations where the loaded and the light track crossed on the PCC Gravity was a short distance below the foot of Plane No. 14, where there was a "Branch Switch Back" between the "loaded" and "light" tracks.



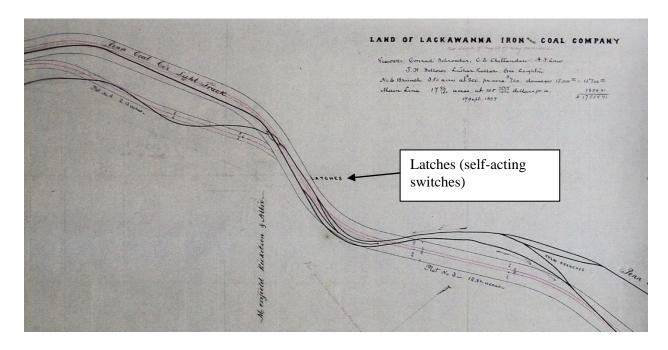




Jones Pond (Lake Ariel) area:



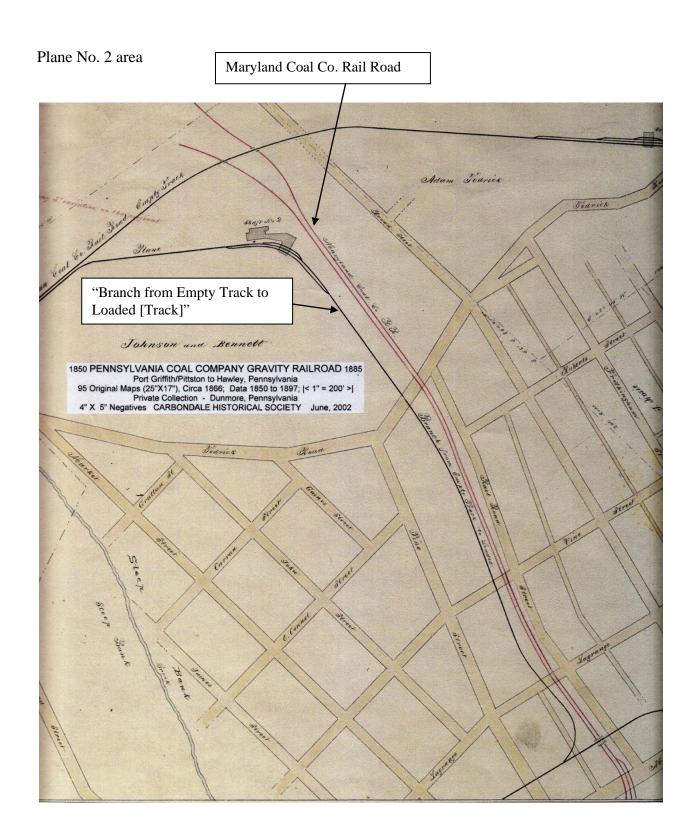
Latches on the Light Track near the site of the former Nay Aug Park



"There were places where the two tracks crossed each other, such as at planes 3, 4, 5, 12, and 14. There were two places on the line where a connecting line was made between the tracks, one near Bunker Hill in Dunmore to number 6 and one from number 12 on the heavy track to number 19 on the light track. The one near Bunker Hill was designed so that empty coal cars could be returned to the Dunmore mines instead of all the empties going on to Pittston. It was referred to as 'The Latches'. The latter connecting line was designed so that later, when the PCC instituted passenger service, people could bypass Hawley and save some time if their real destination was Dunmore or that vicinity." (*The Pennsylvania Coal Company Gravity Railroad* by Scott Kester, pp. 46-47, April 2000, Master of Arts thesis, Department of History, University of Scranton)

**Light track:** A trip consisted of as many as eight empty cars. Whenever a light trip from Hawley reached Bunker Hill in Dunmore that crew turned its train over to a new three-man force who in turn took the light trip on down to Pittston. The Hawley crew then walked across to the loaded track at Number 6, where they picked up a train of coal cars to be taken on to Hawley.

**Loaded track**: A trip consisted of five loaded coal cars



C. Basic Facts on the Planes and Levels on the Pennsylvania Coal Company's Gravity Railroad:

#### **Loaded Track**

There were **12 ascending planes with levels on the loaded track.** The 12 loaded planes were 4.37 miles long, the 12 loaded levels were 42.35 miles long, the complete loaded track was, therefore, 46.72 miles long. All of the motive power on the loaded track was furnished by stationary steam engines. On some planes the engine was at the foot of the plane; on others, it was at the head of the plane.

The 12 planes and length in feet:

1 (Port Griffith), 1162; 2 (Pittston), 1901; 3 Avoca, then called Pleasant Valley), 1954; 4 (Moosic, near Rocky Glen), 2218; 5 (South Scranton), 2270; 6 (Dunmore; "Bunker Hill"—this was a transfer point for crews from loaded to light track), 1901; 7 (Dunmore, on "Sport Hill; this plane had a curve to the left in it), 1901; 8 (Dunmore), 1901; 9 (Dunmore), 1901; 10 (Dunmore), 1901; 11 (Dunmore and Jefferson Township, 2112, there was a curve to the right in 'Old No. 11'); 12, 1954

The highest point on the loaded track was at the top of Plane No. 11, which was 1,400 feet above Port Griffith.

The 12 levels and length in feet:

1, 10,666; 2, 15,152; 3, 8,818; 4, 15,206; 5, 15,152; 6, 5,702; 7, 475; 8, 264; 9, 1,214; 10, 4,541; 11 (passed through a tunnel 755 feet long, the only one in the system; because of the tunnel it was not necessary to build another plane to get over the top of the mountain), 75,554 feet or 14.3 miles, the longest of the levels on the loaded track; 12 (Hawley), 71,966

# **Light Track**

There were **10 ascending planes with levels on the light track.** The 10 light planes were 3.36 miles long, the 10 light levels were 43.56 miles long, the complete light track, therefore, was 46.92 miles long. The first three planes coming west from Hawley (Nos. 13-14-15) were originally powered by water wheels, with water from Middle Creek. Later, all the planes on the light track were operated by stationary steam engines. On some planes the engine was at the foot of the plane; on others, it was at the head of the plane.

The 10 planes and length in feet:

13 (Hawley), 1162; 14, 1637; 15, 1690; 16, 1901; 17, 1901; 18, 1464; 19 (Lake Ariel), 1531; 20 (near Saco), 1848; 21 (Wimmers. At the top of the plane near Wimmers, was the highest point on the light track. From there the cars rolled downward for 20.7miles to Avoca and Plane No. 22), 1901; 22 (Avoca), 2,693

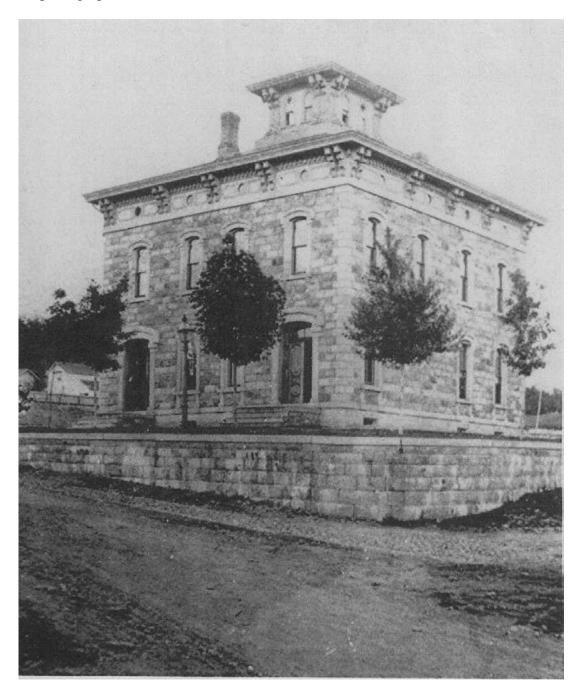
The 10 levels and length in feet:

13, 6,454; 14, 15,946; 15, 11,563; 16, 10,972; 17, 4,282; 18, 10,930; 19, 22,493; 20, 10,349; 21, 109,402 feet or 20.72 miles, the longest of the levels on the light track; 22, 25,397. The grade on these levels: James Archbald determined that a descent of 47 feet per mile was necessary for empty cars.

The two longest levels on the Pennsylvania Coal Company's railroad from Port Griffith to Hawley were Level No. 11 on the loaded track, which was 14.3 miles long, and Level No. 21 on the light track, which was 20.72 miles long.

Remarkably, the complete loaded track (all planes and levels) and the complete light track (all planes and levels) were very close to being the same length: the loaded track was 46.72 miles long, and the light track was 46.92 miles long. In the entire Pennsylvania Coal Company Gravity Railroad (loaded and light tracks) system there were 93.64 miles of track.

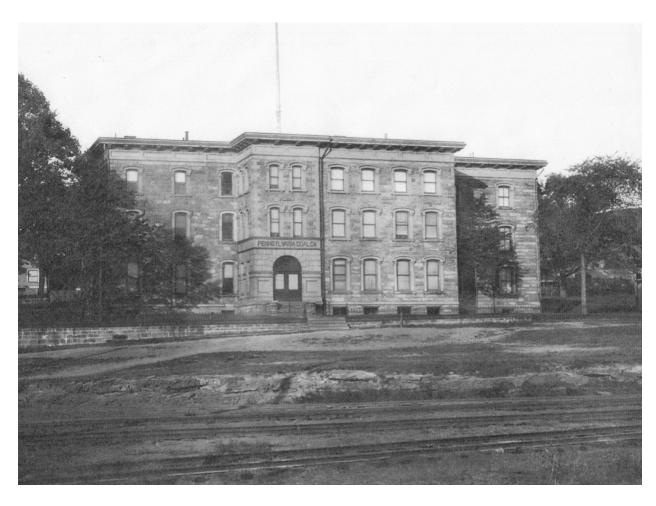
D. Seventeen photos about the Gravity Railroad of the Pennsylvania Coal Company. On November 3, 2016, Sal Mecca, Dunmore, lent to the Carbondale Historical Society two albums of materials that he has assembled on the Gravity Railroad of the Pennsylvania Coal Company. These 17 photographs are from those two albums.



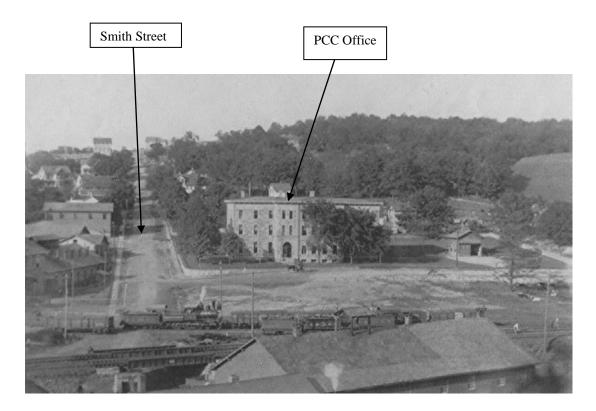
The New Pennsylvania Coal Company Office Building at the Corner of Smith and Mill Streets, Dunmore



Office of the Pennsylvania Coal Company, Dunmore, PA, circa 1896



Office of the Pennsylvania Coal Company, Dunmore, PA



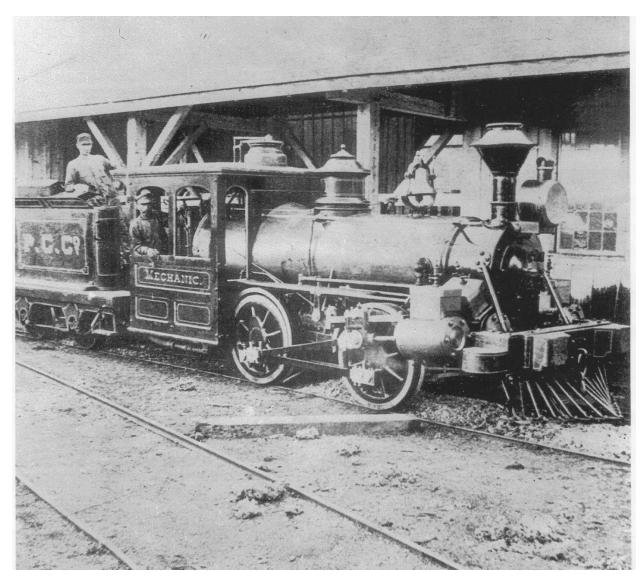
The Pennsylvania Coal Company Office. View is Up Smith Street, Named in Honor of John B. Smith

In Volume 8, No. 4, p. 2, of the October 2016 issue of *The Gazette* (newsletter of the Dunmore Historical Society), we read:

## Pennsylvania Coal Company

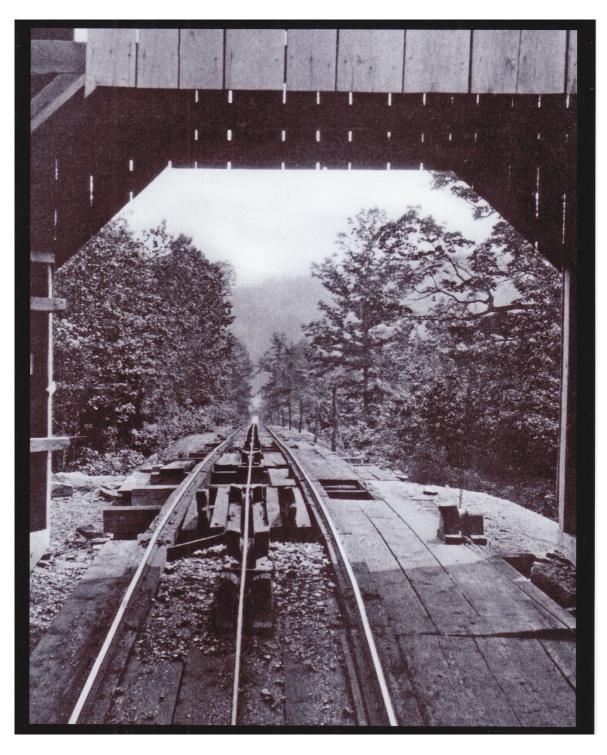
With the raizing of the Pennsylvania Coal Company offices earlier this year, there is no longer any visible trace of the company that played a formative role in the development of Dunmore. The Dunmore Historical Society is happy to announce that the Pennsylvania Bureau for Historic Preservation has been petitioned to place a Historical Marker at the site where the offices once stood. The Historical Society Staff completed the application, along with the required supporting documentation, and submitted them to Harrisburg this past July. The Bureau will judge the importance of the marker placement and rule on its acceptance in the spring of 2017. It may be necessary to also petition our newly elected representative from the 112<sup>th</sup> Legislative District to support our cause. We will keep you posted on the application's progress.

(www.dunmorehistory.org; dunmorehistorical@gmail.com; 570-558-1060)



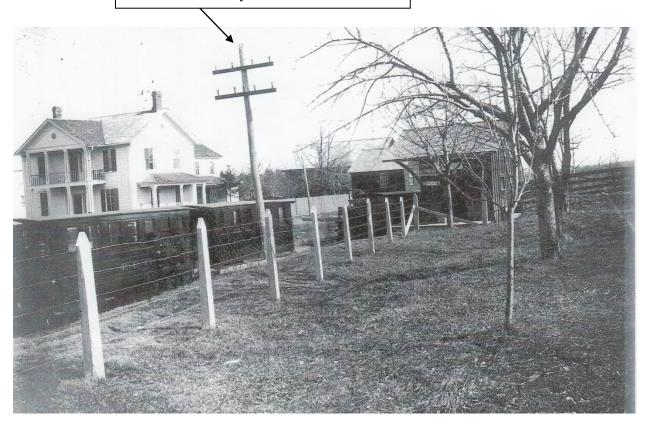
PCC Gravity-Gauge Steam Locomotive, "Mechanic"

This engine was used as a switcher engine, probably both at Dunmore and at Hawley.

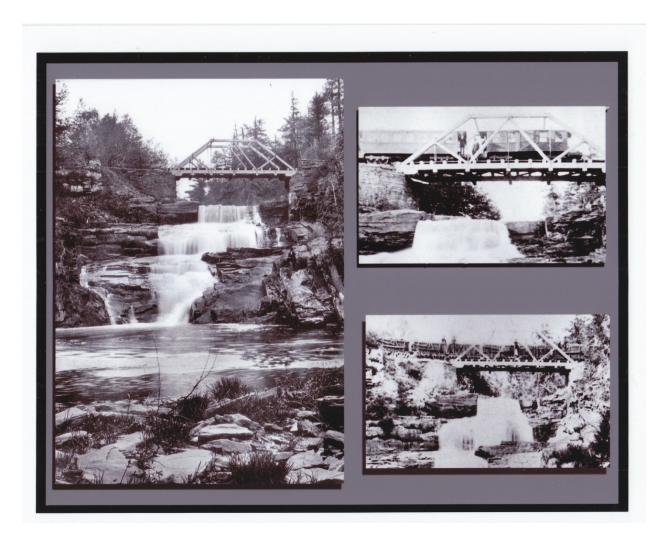


Looking Down No. 10 Plane, from Inside the Head House

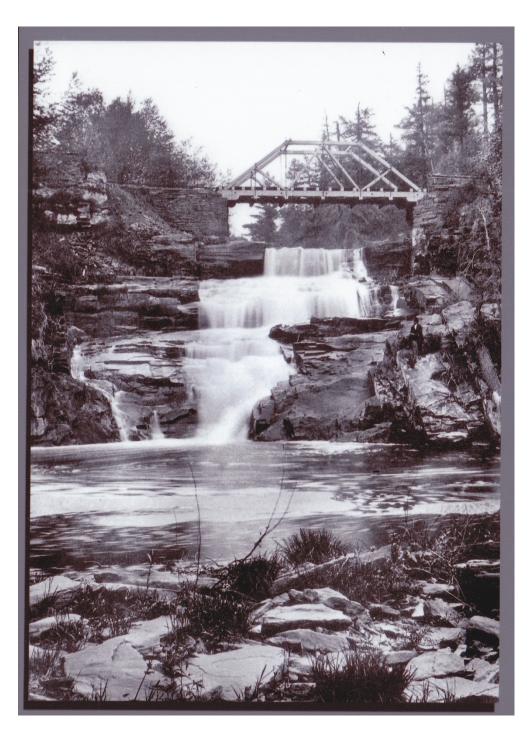
Telegraph pole at Lake Ariel. Did the telegraph line extend all the way to Dunmore?



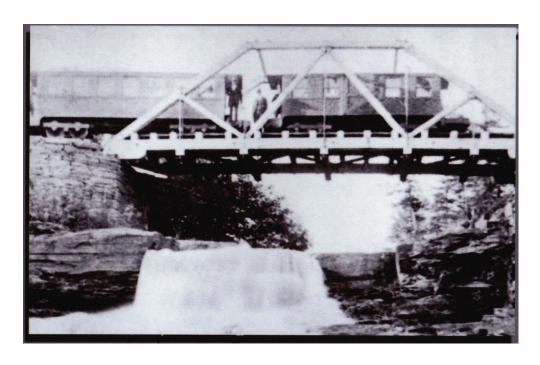
"Pioneer" Passenger Car at the Head of Plane No. 12 [loaded track], Lake Ariel, PA



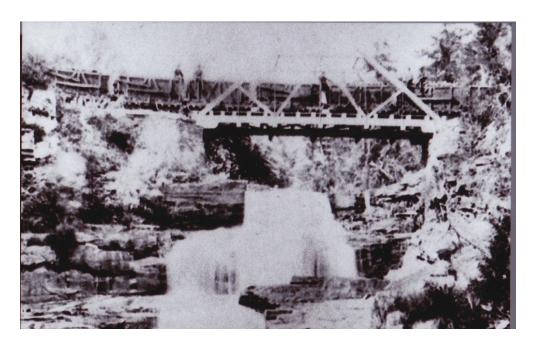
Three Photos of the Middle Creek Falls Bridge, Looking Upstream



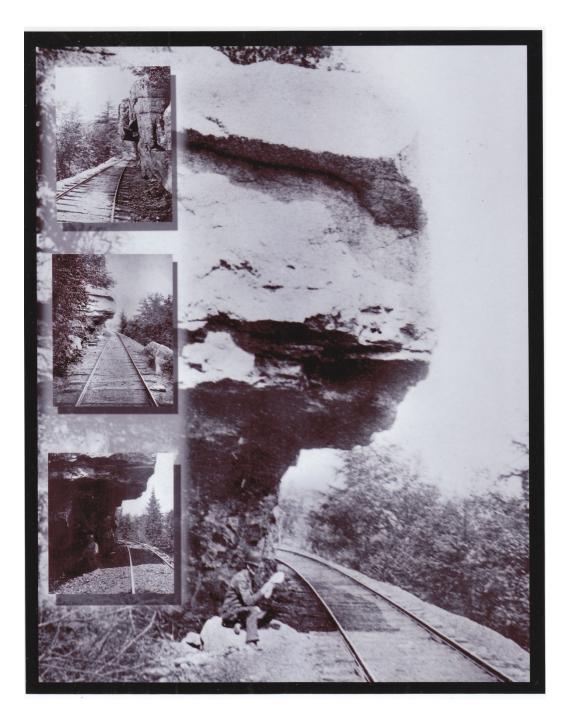
Bridge over Middle Creek and Falls



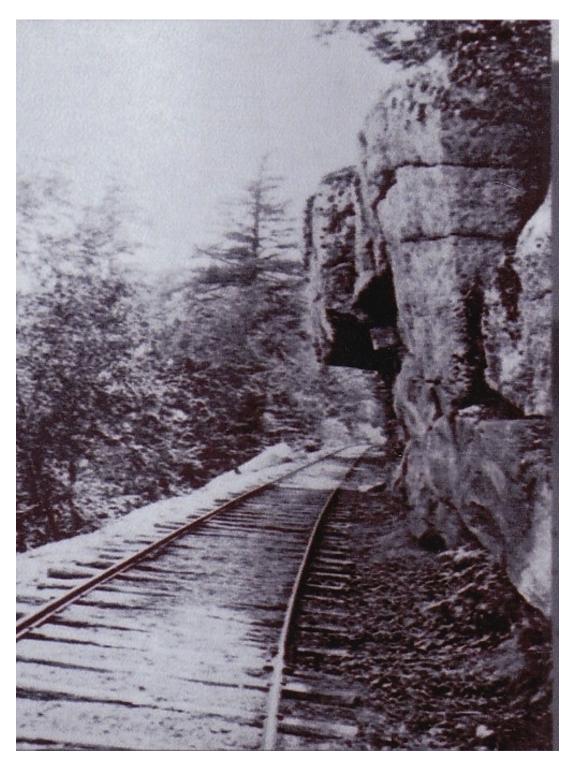
PCC Passenger Cars on Middle Creek Bridge on Wangum Road (formerly Level No. 12)



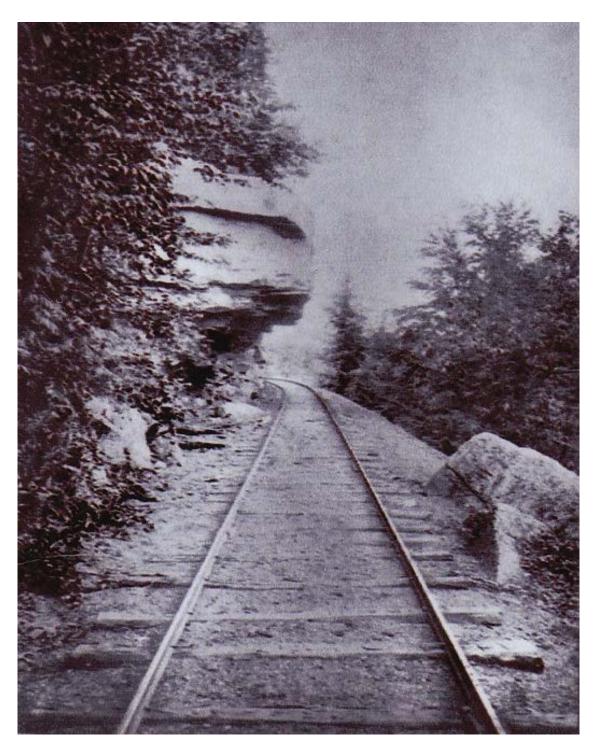
Coal Cars on Bridge over Middle Creek on Wangum Road (formerly Level No. 12)



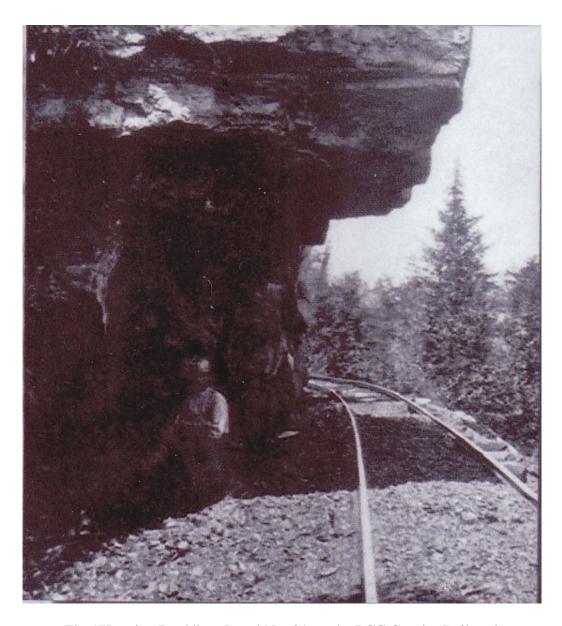
The "Hanging Rock" on Level No. 21 on the PCC Gravity Railroad



The "Hanging Rock" on Level No. 21 on the PCC Gravity Railroad



The "Hanging Rock" on Level No. 21 on the PCC Gravity Railroad



The "Hanging Rock" on Level No. 21 on the PCC Gravity Railroad



Erie & Wyoming Valley Railroad Depot, Gravity, PA



Erie & Wyoming Valley Railroad Depot, Gravity, PA

End of material from Sal Mecca, November 3, 2016.

THE

# WYOMING VALLEY,

UPPER WATERS OF THE SUSQUEHANNA,

AND THE

### LACKAWANNA COAL-REGION,

INCLUDING

VIEWS OF THE NATURAL SCENERY OF NORTHERN PENNSYLVANIA,

From the Indian Occupancy to the Year 1875.

PHOTOGRAPHICALLY ILLUSTRATED.

EDITED BY

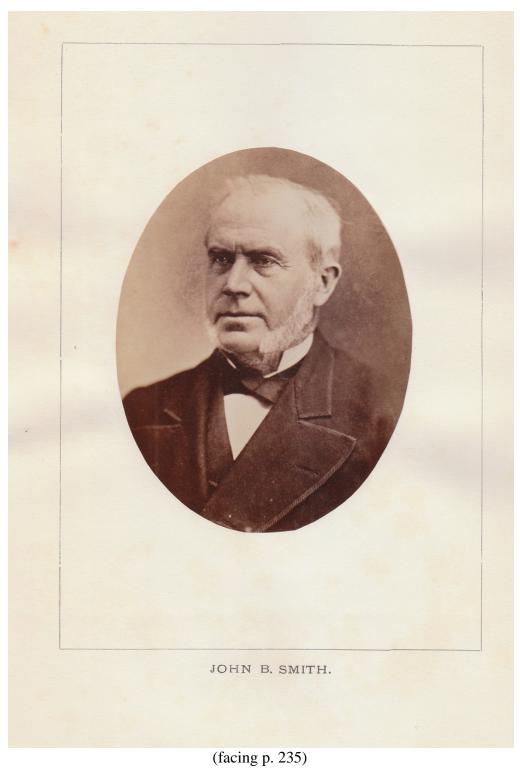
J. A. CLARK.

SCRANTON, PA.:

J. A. CLARK, PUBLISHER.

1875.





#### CHAPTER XXXXI.

JOHN B. SMITH AND THE PENNSYLVANIA COAL COMPANY.

The Pennsylvania Coal Company is represented in the mining district by John B. Smith, esq., who is one of the oldest and most experienced of the representative coal men of the two valleys. He was born in Sullivan County, New York, his father being a foreman and contractor, having come from New England. The boy left school at the age of thirteen, and entered a store as clerk. In 1830 he was driving horses upon the Delaware and Hudson Canal Company's Railroad; then he became a machinist; afterwards an engineer, and since 1848 has been engaged with the Pennsylvania Coal Company as Master Mechanic, and since 1854 as General Superintendent. He resided in Dunmore during the past quarter of a century, devoting his time and energies to the developing of the mineral resources of the company in a creditable and highly exemplary manner.

The Pennsylvania Coal Company was originated under the name of the "Wyoming Coal Association" in 1847, by which a number of gentlemen, principally stockholders in the D. & H. Canal Company, sought to add to the improvements of the Lackawanna Valley, by a larger production of coal. After the surveys were conducted under a charter granted to Wm. A. Dimmick and other citizens of Honesdale in 1838, a lage body of lands located in the present Borough of Dunmore, then held by Messrs. William and Charles Wurts, of Philadelphia, came into the possession of the association. During 1847, a point at the junction of Middle Creek with the Lackawaxen was agreed upon as a terminus, and a town sprung up, which was

named Hawley, after the chief executive officer of the association. The road extending over the Moosic Mountain, toward the Coal Fields, was begun in 1849. The machinery of the road, and the necessary appliances for separating, screening and delivering the coal, was under the charge of John B. Smith, esq. The land purchases were extended farther down the Wyoming Valley, until they reached the north line of Wilkes-Barre Township. By the purchase of a large quantity of land, upon which much of the present flourishing town of Pittston is situated, they came into possession of a charter granted in 1838, incorporating Jas. W. Johnson, Chas. T. Pierson, Charles Fuller and associates, under the title of "The Pennsylvania Coal Company."

The entire road was completed in 1850, and the first coal sent out in May of that year. Ample deposit grounds are owned at Newburg, on the Hudson, and at Jersey City The location of the Machine Shops were at first located at Hawley, afterwards, for convenience to the mines, large and extensive shops were erected at Dunmore, where fine stone buildings were located.

The shipments of the Pennsylvania Coal Company are now about 4,500 tons per day. It has one hundred miles of railroad in operation, and that part of their route, from Pittston to Hawley, has already earned the reputation of being the most romantic pleasure route for summer tourists in the Eastern States. The company, in anticipation of the great demand, which will be made upon them in the future by tourists, have fitted for their accommodation neat and commodious passenger carriages, to be used dur-

ing the summer season, for all who choose to visit this truly romantic section. With a spacious hotel at Moosic Lake, and moderate rates of charge, this region could attract thousands each year to the coal regions. The high rates of the large hotels in the coal region, serves as a barrier in keeping away many who would desire to come. Families from neighboring cities can see but little pleasure in prospect, if they are compelled to leave their own spacious rooms in heated weather, and take instead the contracted walls of a brick hotel in the coal regions, more dusty and oppressive than the ones already vacated. Summer travel must be accommodated if we expect it to float this way, and Moosic Lake is the only really desirable spot at present.

The coal fields are generally considered as among the most valuable owned by any corporation in this coal basin. In addition, the company is possessed of nearly ten thousand acres of wood land, some eight thousand of which

being heavily timbered are carefully preserved against a future day of need.

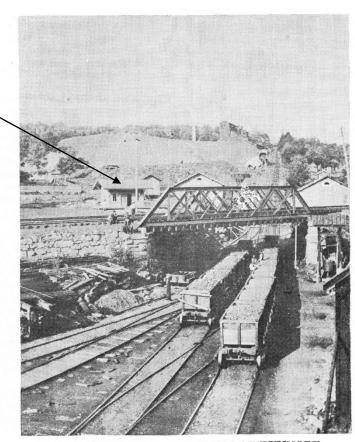
The President is John Ewen, esq., of New York city, who is considered one of the ablest men of the coal railroad princes. Assisted by Mr. John B. Smith, of Dunmore, the company is justly entitled to rank with any corporation of the kind in the country. It is said that owing to their system of transporting coal over the planes of their gravity road, that they are enabled to produce and sell cheaper than their competitors; however this may be, it is a fact that when many of the mines in this region are idle, the Pennsylvania Coal Company's Breakers are engaged to their fullest capacity in turning out coal. The longest descending plane, loaded, is 20 72 100 miles. The cars are drawn up the planes by three stationary engines of fifty horse-power each, placed at the head of the plane, and then descend the "level" by their own gravity.



#### F. PCC Gravity Railroad Miscellaneous Materials:

Foot of Number Six Plane at Dunmore, Showing PCC Gravity Railroad Passenger Station at Foot of Number Six (T. C. Connolly, p. 24):

Pennsylvania Coal Company Gravity Railroad passenger station at foot of Plane No. 6, Dunmore. Passenger service existed only between Dunmore and Hawley, with passengers boarding at "The Lathes" (close to where Route 81 crosses Moosic Street.



FOOT OF NUMBER SIX PLANE AT DUNMORE.

The bridge is on the D.L.&W.R.R., toward the right is toward New York. The little building across the D.L.&W. is the Number Six passenger station. The breaker is served by this plane as is also the small structure just below it, the coal pockets for retail sales. At the right center of the picture is the counterbalance tower that took up the slack in the endless hoist rope on the right hand plane. Number Six was a double plane. The coal cars are waiting to be hoisted, more cars will come in up the loaded tracks in the foreground. Under the railroad bridge, to the left, is the "balance car" the use of which will be explained later. The slanting bar on the rear of one of the coal cars is the lever by which the brakes were operated. There was a system of further levers on the side of the cars that put additional pressure on the brake shoes.

Original photograph by Hensel.

Copy by E. P. Hulbert.

In 1876, the Pennsylvania Coal Company had a contract with the Erie Railway Company to transport nearly 4,000 tons of coal, daily, from Hawley to Weehawken. In the *Carbondale Leader* of September 9, 1876, we read:

"The Pennsylvania Coal Company has a contract with the Erie Railway Company to transport coal from Hawley to Weehawken. The contract is for 358 cars per day, or nearly 4,000 tons." (Carbondale Leader, September 9, 1876, p. 3)

The Pennsylvania Coal Company's Gravity Railroad from Pittston to Hawley was replaced by the Erie and Wyoming Railroad, which became operational in December 1884. The advantages of this new steam line are highlighted in the article given below from the *New York Times* of December 12, 1884:

"DISPLACING A GRAVITY ROAD. / Wilkesbarre, Penn., Dec. 11.—The Erie and Wyoming Valley Railroad is now in complete running order and will afford great facilities for hauling coal of the Pennsylvania Coal Company. It is a locomotive road, taking the place of one of the two remaining important gravity railroads in the United States—that of the Pennsylvania Company, extending from the Lackawaxen-Hawley Line and the Delaware and Hudson Canal, at Hawley, over the mountain to the mines about Pittston, a distance of 47 miles. The gravity railroad has served to carry the heavy eastward shipments of the coal company to the Erie, but as it is of 4 feet 3 inches gauge a transfer was necessary at Hawley, while now the locomotives will take the coal trains directly from the mines about Pittston to Newburg or other market or shipping points. But the avoidance of the transfer is not the only advantage secured by the new road. Westward shipments of anthracite over the Erie are received by it at Carbondale, on the Jefferson branch, extending from the main line at Jefferson Junction nearly due south 34 miles, and over independent railroads 10 to 11 miles further. These shipments westward can be made most advantageously in box cars, which would otherwise go West empty. To get these cars to the mines it has been necessary to take them empty from New-York northwest to Jefferson Junction, 188 miles, and then south 40 miles or more, partly over the tracks of roads not interested in moving them promptly. By the new road 80 miles of hauling of empty cars will be saved." (The New York Times, December 12, 1884)

With the closing of the Pennsylvania Gravity in 1885, coal pockets in Hawley were no longer necessary for the movement/shipment of PCC coal. As such the pockets were removed. In *The Journal* of April 22, 1886, we read:

"The Honesdale *Citizen* says: All the coal is being removed from the pile of the Penn'a Coal Co., in Hawley, as rapidly as possible, and when the work is completed the pockets will be removed, after which date our neighboring borough, as a storage point, will be a thing of the past." (*The Journal*, April 22, 1886, p. 3)

About passenger service on the Pennsylvania Coal Company's Gravity Railroad, we read the following in Mary Theresa Connolly's *The Gravity History of The Pennsylvania Coal Company Railroad 1850-1885* (Scranton, 1972):

"Passenger train service only exited between Scranton and Hawley, with customers boarding and leaving the cars at a point near present day Nay Aug Park known as 'The Latches'. In the late fall of 1850 the first run of the 'Pioneer', the Gravity passenger train, was made with Hosea Carpenter its conductor. A 'Pioneer' was capable of carrying about twenty persons. Its seats, which ran lengthwise, like present-day subway cars, were made of pine. . . Lighted by a pair of oil lamps, these cars were heated by a coal stove. Each car had a brakewheel on one end of its platforms and the car often was weighted with iron to make better speed. The passenger trains according to 'The Pennsylvania Story' had a baggage car in the front and a smoker and coach in the rear. Two 'Pioneer' trains made round trips daily except on Sundays. One left Dunmore about 8:30 a.m. and the other left Hawley at about 3:30 p.m. The fare was one dollar and to go from terminal to terminal took about an hour and a half to two. . . From Number 6 in Dunmore the passengers were taken to any destination they chose between Number 6 and Number 12 the end of the line in Hawley on the loaded track. Many a person or family who boarded the 'Pioneer' at No. 6 were on their way to Number 19 (Jones Lake, today's Lake Ariel) for a day's outing or church social. To get to Number 19 on the light track, the 'Pioneer' left Dunmore travelled to the head of Number 12 and from there dropped down the crossover to Plane 19 which was on the light track.\* Passengers from Hawley were taken as far as 'The Latches', which were a bit beyond Number 6 and situated about where the present Daleville-Pocono Highway goes under the Erie Railroad Bridge at the upper end of Moosic Street to date. Robert Headley was the first conductor of the Hawley passenger train and his brakeman was James Fitzpatrick. Charles Potter then ran the train for a number of years with his successor, conductor John Brink remaining until the Gravity was abandoned in 1885. Peter Siegal was in charge of the other passenger train and later was succeeded by Charles Elston who also remained until the railroad shutdown. . . Gravity freight train service proved to be invaluable to the newly developed towns and settlements along the route. . . Bob Headley was the first man to run a freight train over the Gravity road and this was from Port Griffith to Hawley. The freight trains were made up of six or seven cars and were run once a day in the morning except on Sundays." (pp. 35-36)

\* "There was an overpass or crossover from the head of Number 12 loaded track to the foot of Number 19 light track and a horsedrawn shuttle connected them so that 'Pioneer' passengers could get to points on the light track between Number 19 and Dunmore without going around by way of Hawley." (E. P. Hulbert, The Pennsylvania Coal Company Gravity Railroad, a report prepared for reading at the Lackawanna Historical Society, December, 1949, pp. 17-18)

Telegraph Operators on the PCC Gravity Railroad:

Pittston (Homer Greene, William Teeter, A. M. Bingham), Avoca (C. C. Bowman, J. T. Fear), Dunmore (George B. Smith, John Raught, Charles P. Savage), Hawley (Monroe Thorpe, Elmer E. Vicker), No. 19 (Mrs. Susan Sandercock). (*T. C. Conolly*, p. 30)

The Pennsylvania Coal Company's Gravity Railroad Featured at the Thomas Kennedy Local History Festival at the Dorflinger Factory Museum, White Mills, PA, April 22, 2017:

Here is the poster that announced the PCC Gravity Railroad presentation at the Dorflinger Factory Museum on April 22, 2017:



Chretien Dorflinger, 1828-1915

## The Thomas Kennedy Local History Festival

Dorflinger Factory Museum, 5 Elizabeth Street, White Mills, PA 18473 Saturday, April 22, 2017, 10 A.M. – 3 P.M.

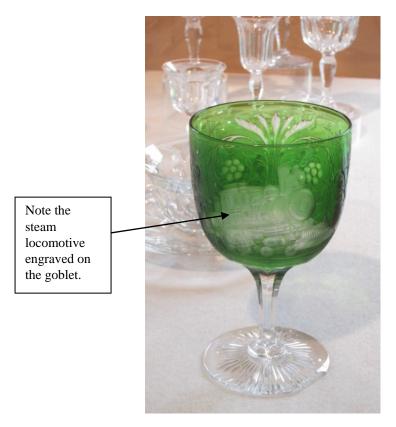
## **Local History Presentation by Dr. S. Robert Powell** 10 A.M. -11:30 A.M.

The Pennsylvania Coal Company's Gravity Railroad, 1850-1885



John B. Smith, Superintendent of the Pennsylvania Coal Company's Gravity Railroad, 1850-1885

About seventy persons attended the presentation on the Pennsylvania Coal Company's Gravity Railroad by the author. At that presentation, the Dorflinger Factory Museum host, Jim Asselstine noted that Chretien Dorflinger presented John B. Smith, in 1892, with a goblet, now in the Dorflinger Factory Museum, with a steam locomotive engraved on it. Here is a photograph of that goblet that the present author took of that goblet on April 22, 2017:



Here is the account of this Thomas Kennedy Local History Festival that was published on page 1 of the Tuesday, April 25, 2017 issue of *The Wayne Independent*:

# WAYMART, PA 18472-0346 DELETER DENT

Tuesday, April 25, 2017

www.WayneIndependent.com

LOCAL HISTORY

# A step back in time



Dr. S. Robert Powell, president of the Carbondale Historical Society, spoke during the history festival. [PHOTO BY DAVID MAZZENGA]

By David Mazzenga For The Independent

WHITE MILLS — The Dorflinger Factory Museum was bustling with activity on Saturday for the annual Thomas Kennedy Local History Festival.

Museum Director and Thomas Kennedy Local History Roundtable Chair Jim Asselstine said the festival's eponymous figure was a history teacher with a passion for preserving local history.

"There's a tremendous amount of local history in this area," said Asselstine, listing the historical contributions left by remnants of the coal, rail, canal and glass industries. "It's really critically important, we think, to make people aware of the history of this area and all of these technical

innovations that occurred right here."

The prominence of such technical development was reiterated several times in the festival's keynote speech, delivered by Dr. S. Robert Powell, president of the Carbondale Historical Society.

Detailing the growth and significance of the lesser-known Pennsylvania Coal Company's Gravity Railroad, the speaker praised the numerous technological developments which took place in the 19th century in order to bring coal from the Lackawanna Valley to Lacawaxen.

Powell noted the ability of 19th century Wayne County residents to divert water paths in order to construct canals for transport and

SEE HISTORY, A9

### **HISTORY**

From Page A:

waterwheels on planes 13, 14 and 15 to power empty cars back over the mountains to be refilled.

Overcoming the mountains near Moosic was also a remarkable feat Powell pointed out.

The highest plane constructed along the path was in an area that Powell described as an "ecological treasure trove." The plane was so high that ceder trees growing there were able to survive a blight which eliminated almost all others. Powell noted they still flourish up there, growing to impressive sizes.

Powell said that, at the height of its use, the Pennsylvania Coal Company Gravity Railroad sent as many as 9,000 cars loaded with up to five tons of coal along its route.

The Pennsylvania Coal Company and the better-known Delaware & Hudson (D&H) company were crucial in bringing Wayne County into prosperity and ushering America into its industrial development, Powell said.

The D&H was so successful it was soon counted among the first multi-million dollar corporations in the country, said Powell.

Regarding the festival as a whole, Powell said, "The Tom Kennedy Local History Festival is an excellent medium to record and preserve the local history of the area. "We know a lot about local history," he added, "but we still have a lot to learn and through the medium of this festival we'll be able to enrich our knowledge of the history of the area."

In addition to Powell's keynote speech, 12 organizations from across Wayne County presented their own facets of local history.

A table from the Equinunk Historical Society was leaden with extensive historical literature about the area.

They also had a display of period tools from the Holbert & Branning Tannery and samples recently

uncovered from a dig site near a covered bridge in Roscoe, N.Y.

According to one of the Equinunk Historical Society directors, Robert Wood, the samples had been in the ground for 129 years, remnants of a tannery that burnt down in 1888.

"Not only is [studying local history] important, but it's profitable," said Wood. He explained that sales of the society's history books have been instrumental in funding the society and its museum.

Wood also said the society is hoping to start work this summer on a new exhibit showcasing antique metaland wood-working tools. The Waymart Historical Society was also in attendance showcasing a video clip of its recently refurbished D&H Gravity railroad model.

The model showcases the loaded and unloaded lines running a 15-mile stretch from Honesdale through Waymart to Carbondale.

One of the society's missions is to preserve the knowledge about the Gravity line because of its significance to the area, said society representative George Schaffer.

"We should keep this going for generation after generation," he said. "If not, you're only going to read a little bit about it in a history book."

Wayne County Historical Society Executive Director Carol Henry Dunn said, "As one of the many historical societies that have gathered here today, we really appreciate the welcome that we received from Mr. Asselstine and from the leaders of the Local History

Roundtable because this is a wonderful way to show-case what we're doing as one of the many local history organizations."

With a smile and a chuckle, she added, "It's like all the history geeks getting together for one day; we just love talking to one another and seeing the projects that each of us are doing." The county Historical Society featured a display celebrating its centennial and highlighting the new exhibit unveiled later that

This should read: "...American chestnut trees..."

This should read: "As many as 900 per day..." evening at their open house.

In addition to their new display, the county Historical Society also holds an extensive research library containing numerous print and photographic sources from the early decades in the 1800s, said library director Bart Brooks.

He said one of the common uses of the library is to search historical newspapers, tax papers and legal documents for genealogical research.

Commissioners Brian W. Smith and Joseph W. Adams were present at the festival and both were equally impressed by it.

"It was exceptionally well done," Adams stated, calling Powell's presentation "amazing" and complimenting Asselstine and all the festival's organizers for a job well done.

Sharing in Adams' sentiments, Smith stated the festival and Powell's speech "blew my mind." For Smith, preserving the time period regarding the heyday of the canal and the railroad is important because of the jobs it created locally and role it played in elevating America to the status of superpower.

docur resear Con W. Si

Thank you Commssioner Brian

Commissioner Joseph

Thank you,

W. Adams.

W. Smith.

Both commissioners were also impressed with the Dorflinger museum and its exhibits, encouraging anyone who has not already gone to do so.

"People who have not had the opportunity to go to the glass factory are missing out," Adams stated.

With the Thomas Kennedy History Festival completed, Asselstine says the museum is now re-opened for the season, Wednesday through Sunday.

"If people can come out, we're delighted to have people visit here and all our member organizations," said Asselstine.

Asselstine also mentioned that the museum will host a celebratory symposium for the Wayne Gounty Historical Society's centennial anniversary on June 24 from 8 a.m. to 4 p.m.

It will feature an array of speakers, presentations and panel discussions about Wayne County and its oldest historical society.

#### 4. Underground Gravity Planes

[Underground "gravity" railroad planes] Biographical sketch, with photo, of Frank S. Clark in the September 1, 1936 issue of The Delaware and Hudson Railroad Bulletin, pp. 131-32: "RAN UNDERGROUND PLANE / Retired Parsons Engineer Began 58-year Service on Mine Road / The fact that the Delaware and Hudson's first railroad, which crossed the mountains between the anthracite mines in the Lackawanna Valley and the canal at Honesdale, PA., was for the most part gravity operated, is more or less common knowledge. That an underground gravity railroad system was in use by the company in the mines at the same time is not so generally known. / FRANK S. CLARK, veteran of 58 years' service with the Company, 'ran' an underground gravity plane in the mines at Laurel Run (Wilkes-Barre) Colliery, back in the seventies. The gravity system was used to replace the loaded cars in mining chambers above the main tunnel with empties to be filled. When three cars had been loaded in the chamber a steel rope was run from the last car of the string, around a sheave equipped with a brake drum and lever, to three empty cars at the bottom of the underground plane. By removing the sprag which blocked the front wheel of the loaded string, the loads were started down the plane, their weight pulling up the three empties. By the hand brake lever the movement of the two 'trains' could be controlled until the empties were 'spotted' and stopped at the top of the plane, the loaded cars being hauled out of the mine by mule-power. . . " (p. 131)

[More very interesting mining/railroad career information from Frank Clark's biography]

"MR. CLARK, who was born at Waymart, Pa., a station of the Carbondale-Honesdale Gravity Railroad, June 14, 1862, entered the Delaware and Hudson Canal Company's employ, in the Coal Department at Laurel Run Colliery, at the age of 11, as a 'breaker boy' or 'slate picker.' Less than a year later he was given the task of 'oiling the breaker'--lubricating the big rollers which crushed the 'run of mine' coal, the cogs, cable- and belt-wheels which connected the rest of the machinery with the steam engine which drove it. . . / In the thirteen years he spent in the Coal Department he served, in addition, as ventilating door tender down in the mines; as the driver of the mules which hauled the empty and loaded mine cars in and out of the workings; and finally as a 'runner' on the slope leading from the mines to the surface. On the last mentioned job, it was his duty to ride the empty cars as they were lowered by cable from the outside stationary engine house to the various 'levels' and 'drifts' underground and to attach the cable to loaded cars to be hoisted up the slope to the surface. Communication between the 'runner' and the stationary engineer was maintained by bell-cord signals, a device long since replaced by electronically-operated signals." (pp. 131-32)

#### **Additions for Volume VII:**

#### 1. Mules in the mines, from *Miller and Sharpless*

#### WORKING IN THE BLACK HELL

Mules provided the locomotive power in the mines before the introduction of the electric motor. They were highly valued because they were more sure-footed, more powerful, and sturdier than horses and less susceptible to illness. Usually they were kept underground in a widened section of the gangway known as the "barn." Their care was supervised by a "barn boss," who saw that their drivers cleaned out their stalls, fed and watered them daily, combed them, and cleaned the harnesses. The

101

attention they received caused some miners to feel that the mules were valued more than the men.

Mule drivers were generally boys in their early teens who enjoyed the job because it gave them freedom of action. The boisterous and aggressive drivers, who already had several years' experience underground, learned the quirks and idiosyncrasies of individual mules—and the mules of the boys—so that sometimes the mules responded to the commands of only one particular driver. Frequently mules shared driver's lunches or developed a taste for tobacco. It was not unusual for a driver to pull a plug of tobacco from his pocket, give a bite to his mule, and jam the remainder into his mouth.

The boys used no reins to drive the mules. The drivers sat or stood on the front bumper of the car and either shouted commands or directed the mules with a "black snake" whip made of braided leather attached to a short, stout stick for a handle. The whips had "crackers," or tassels made of hemp, on their tips which made sharp reports when the whip was swung in the air and jerked back abruptly. The mules learned what the crack of the whip meant and were directed accordingly. Sometimes the drivers simply led the mules, harnessed either singly or in tandem, the lead animal with a miner's lamp attached to its head or hung from its collar.

Robert Reid of Dickson City, a mine worker for more than fifty years, drove mules in the early part of the century. He had to take care of thirteen working places with one mule, and each chamber had to take six cars. "If you accomplished this by quitting time," he recalled, "all well and good; if not you had to stay until the work was done and received no extra pay for the additional time required."14 The mules had to be cleaned, harnessed, and out of the barn by 7:00 A.M. Reid usually took four empty cars and distributed them at chambers along his route. At each chamber the mule was unhitched from the trip, rehitched to one empty, and led into a chamber. "Where we could not get the car up into the chamber far enough," Reid said, "we simply turned the mule around and it pushed the car up the required distance with its breast. The mule was trained to do that work." After the empties were distributed, he brought loaded cars back to the place where they were sent to the surface. Reid observed that the work was not without its difficulties: "There was always the danger of being crushed between the cars or between the cars and pillars and props, and that of being kicked or bitten by vicious mules. Not only did one have to learn to drive but had to learn how to govern his mule and keep out of harm's way."15

The mules, notoriously stubborn creatures, had the same independent spirit as the mine workers. Accustomed to pulling a certain number of cars, they simply would not move if an extra one was hitched up. They sometimes stopped work instinctively at quitting time, even in mid-trip, and nothing short of dynamite could move them. Curses and beatings from drivers only elicited a swift kick in return. Mules that spent years in the mines would tremble and became nearly delirious with joy when they were finally brought to the surface and exposed to sunlight, grass, and fresh air. Some memory of the dread darkness below would remain, and at times nobody could force or entice them back down. <sup>16</sup>

The mules were esteemed for their instinct of self-preservation. In the 1850s at Spencer Slope Mine near Black Heath, Schuylkill County, an explosion and fire ripped through the workings. Had some of the miners been able to reach the sump and bury their faces in the water, the oxygen in the water might have sustained them for a while. But only a little black mule reached the sump. It plunged its snout into the brackish water and then, revived, raced up the plane to the surface, where its singed body gave the first alarm of the inferno raging below.<sup>17</sup>

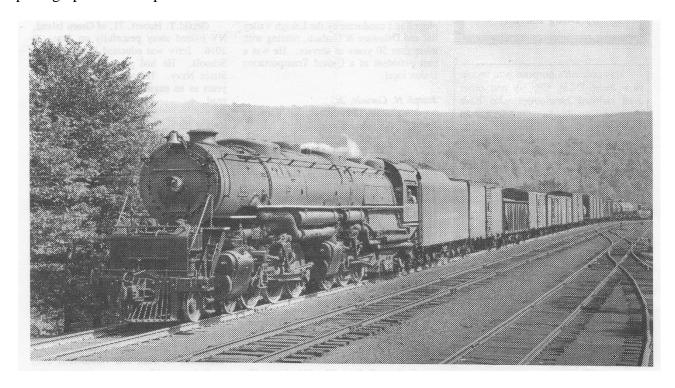
Driver boys and their mules suffered the same fate when accidents occurred. One poignant story relates how a slight and frail boy, who had grown deeply attached to one of his mules, disappeared toward the barn when told that a cave-in had blocked any hope for escape. Though some of the men were eventually rescued, the boy was found lying dead beside his mule, his arms wrapped around the animal's neck in a final embrace.<sup>18</sup>

Eventually mules and driver boys were replaced by electric "trolley" locomotives equipped with wire rope or cables to pull cars out of chambers and about the mines. They required brakemen and "motor runners" to throw switches, drive the trains, care for the motors, and keep sufficient sand, for preventing the wheels from slipping, in the boxes mounted on the locomotives. The electric locomotives naturally speeded transport in the mines, but the exposed overhead wires that carried the current for the trolleys created their own hazards. Chester Siock, who worked as both a brakeman and motor runner, explained, "I got plenty of electric shocks especially when I was a brakeman. When your feet were wet and you grabbed the cable on the reel you got a shock. Once I grabbed the trolley wire and was almost electrocuted. The black damp was so bad that my lamp went out when I was coming out on the head end of the motor. I was using the reel coming out of the chamber and tried to unhook the cable." 19

#### **Additions for Volume XI:**

1. D&H Challenger No. 1533 at Forest City, PA, September 12, 1948

A very nice photograph of D&H Challenger No. 1533 at Forest City is presented in the September 2016 issue of the *Bridge Line Historical Society Bulletin* (p. 17). Here are that photograph and its caption.



"D&H Challenger #1533 leads a 98-car D&H train WR-5 at Forest City, Pa. September 12, 1948 photo by Robert F. Collins, BLHS Archives, MacDonald collection."

#### **Additions for Volume XII:**

#### 1. Belden Hill Tunnel

May 1970:

The cover photo on the September 2016 issue of the *Bridge Line Historical Society Bulletin* shows a D&H inspection train on the South End of the Belden Hill tunnel. Here are that photo and its caption:



"In May 1970, the D&H ran this inspection train on the South End. Alco RS3's 4071-4022 powered this train as it returned to Albany. At the Belden Hill tunnel, the train stopped and management inspected the tunnel on both ends. Photo by Richard J. Allen, Sr."

#### Backtracking: The Early Years

Belden Hill tunnel required expansions through the years by Mark Simonson

It certainly wasn't the first time the lengthy Delaware & Hudson Railway tunnol on Belden Hill was dedicated in late January 1986. There were at least two other occasions, dating back to 1868.

From Jim Shaughnessy's Delaware and Hudson history book, published in 1967, he wrote, "Rugged conditions, the need for boring a 2260-foot tunnel under Belden Hill and a scarcity of labor, delayed completion of the final 22 miles from Harpursville to Binghamton, but the last rail was finally laid, appropriately, on the last day of 1868. Twelve days later, a gala excursion rolled from Albany to Binghamton for the customary ceremonies and banquet. The Rip Van Winkle spell had been broken in the Susquehanna Valley".

The delay was explained by the Oneonta Herald on Aug. 19, 1868. "The work of arching on the A&S RR tunnel has been resumed, and will be completed by the 1st of November. As an inducement to finish the grading of the road between Harpursville and Binghamton by that date, an additional compensation to contractors of \$10,000 has been pledged".

While that project was underway, the Binghamton Democrat reported, "The high bridge near Harpursville is rapidly assuming shape and proportions. This bridge is composed of two spans of one hundred and eighty-six feet each, and the track will be more than eighty feet above the water in the stream. One of the spans is nearly completed. When finished, the bridge will be a very imposing structure, and one of the best of its kind in this section". Part of this bridge is visible today from Interstate 88 on Belden Hill.

Just as there had been a banquet in Binghamton in early 1868, there was an excursion train to mark the re-opening of the tunnel on Jan. 31, 1986.

"Guilford Transportation Industries, owners of the D&H, widened the tunnel to allow trains with oversized loads to pass through", according to the Oneonta Star. The project cost nearly \$9 million. Dignitaries from Oneonta and Binghamton joined railroad and state officials to dedicate the...newly refurbished Belden Hill tunnel".

"They traveled in a special Guilford passenger train. The trip also included a tour of the East Binghamton engine house, which was built with \$3 million in state money to provide light to medium repairs to the company's locomotives, and a tour of the Oneonta car repair shops, for which Guilford officials hope to find additional financing in order to upgrade". The Oneonta car shops closed for the final time in early January 1996.

The tunnel was opened for business back on Dec. 29, 1985. Timothy Catella was a design and construction engineer for Guilford Transportation Industries. "We're looking to start hauling a lot of high-and-wides", he said. These included triple-deckered automobile carriers and other large industrial loads.

State and railroad officials said the project was a bargain compared to two alternatives that state Transportation Department consultants had earlier devised, including cutting away the top of the hill altogether, or abandoning the tunnel and building another one, both of which would have cost more than \$20 million.

Another tunnel project took place during 1941 and 1942, according to the Oneonta Star. The D&H had purchased what were called "1500 [series] locomotives", the largest of any steam engine ever built, costing nearly \$200,000 each. officials said the locomotives may be placed in service between Albany and Binghamton in the near future. This will entail lowering the roadbed and track throughout the long-used 2,200-foot railroad tunnel at Tunnel". Susquehanna Division officials of the D&H said the renovation job would take about 12 months to complete.

Not only did the tunnel require alterations, six stalls of the former Oneonta roundhouse, which was used to repair the steam locomotives, required reconstruction to fit the new steamers.

#### Conrail

"America's biggest and most bankrupt rail system begins a government-backed ride under a new and heavily bankrolled private corporation called Conrail". Oneonta and area residents likely took note of this front-page story of the Oneonta Star on April 1, 1976. "The familiar names of the Penn Central, Erie-Lackawanna, Lehigh Valley, Ann Arbor, Reading, Central of New Jersey and Lehigh & Hudson River railroads will disappear in the takeover of seven ailing Northeastern and Midwestern lines which employ 100,000 persons, one fourth of all rail workers in the United States".

Not among those names was the Delaware & Hudson Railway.

"The lines' old insignias will be visible around the countryside and on rolling stock, however, until 160,000 freight cars and 5,000 locomotives are repainted in Conrail's blue-and-white, part of extensive refurbishing that could take as long as 10 years"

A special three-judge federal court signed legal documents that week completing the largest corporate reorganization in American history at the time. While Conrail was a private corporation, the federal government was ready to watch its progress closely and retain some control over its activities since federal money got it started.

While the D&H was having financial difficulties at that time, but not enough to be part of the takeover, the restructuring allowed a near doubling of its miles of trackage so it could then begin service to Buffalo, New York City, Washington, Philadelphia and Bethlehem, Pa. The line previously served from Montreal, Quebec,

continued on page 30

#### Photos on page 29:

Top: D&H experimental Consolidation #1400, The "Horatio Allen", sits stored on a yard track in Oneonta, N.Y. in 1938. The 1400 was a D&H experiment to create a "Super Consolidation", but didn't meet its goals. Photo by Ted Gay. BLHS Archives, Jack MacDonald collection.

Bottom: Much more modern "super power" BNSF #4355 leads an NS trackage rights train over the A&S main near Oneonta on August 30, 2014. Photo by Steve Lackmann. to Albany, Binghamton and on to Wilkes-Barre, Pa. The D&H grew from 740 route-miles to one with 1,400 route-miles.

Carl B. Sterzing Jr., President and CEO of the D&H at that time, said the competition between his line and Conrail would "make for better service", allowing nationwide connections for its shippers. There was no published local reaction from D&H employees regarding the changes.

What was published in the opening days of April 1976 was a series of derailments on the line. No less than four accidents were reported by Star on April 3. Two of them were in Central Bridge, while separate derailments took place near Schenectady and near the Bridge Street grade crossing in Otego, five and six-car derailments, respectively. No one was injured, and there were no fires from the mishaps.

While the railroad and derailments were making news, it was also a presidential election year. Campaigning for his father Jimmy Carter, 28-year-old Jack Carter and wife Judy were in Oneonta on April 1. Judy visited the SUNY Oneonta campus, while Jack primarily spent time in Oneonta's Sixth Ward. Jimmy Carter was the Democratic frontrunner at the time. "The more people look at him the better they will like him", Jack said of his father. Rosalyn Carter had visited Oneonta only a week before Jack and Judy spent a few hours here.

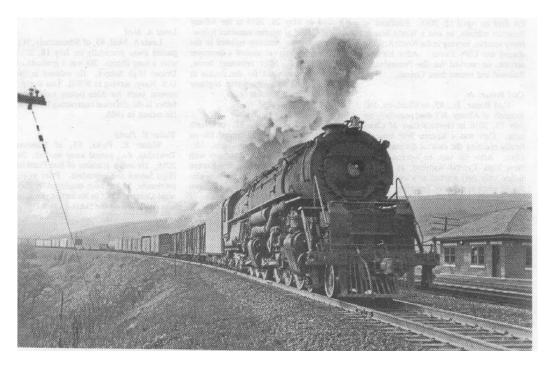
"Examining the old railroad caboose which makes up the Brotherhood of Railroad Trainmen Memorial", in Neahwa Park, Carter, a model train buff, walked around the train, up the stairs and gave it a thorough inspection. "I never had anything like this in my layout", Carter said, peeking in the window. "The first time I ever heard of Oneonta was from a book about the history of the railroad".

Carter also went on a tour of Oneonta's Nader Towers and met some of the lunchtime crowd at the Fiesta Restaurant on River Street. Carter and a contingent moved on to Sidney, where they stood to meet workers making a shift change at what was then called the Bendix plant, today's Amphenol Aerospace Co.

Oneonta City Historian Mark Simonson's column appeared in the **Oneonta Star**; from the collection of **Jack MacLean**.

2. Nineveh Junction (Lackawanna and Susquehanna connected with the Albany and Susquehanna)

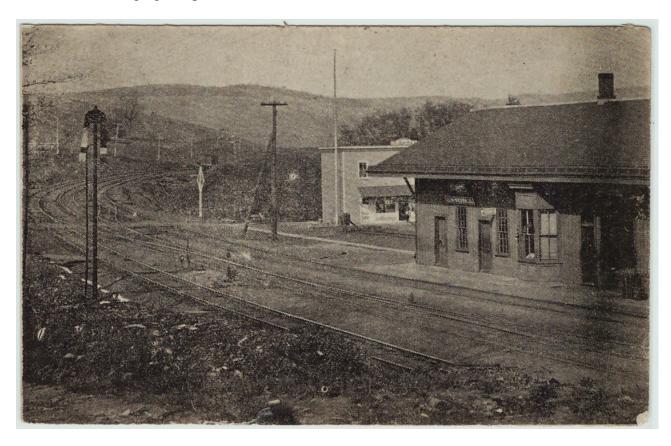
In the September 2016 *Bridge Line Historical Society Bulletin* (p. 17) there is a very nice photograph of D&H Challenger No. 1525 as it approaches Nineveh Junction. Here are that photograph and its caption there:



"D&H Challenger #1525, with a freight off the Pennsylvania Division main, is about to join the A&S Binghamton main at SW cabin, near Nineveh, N.Y. D&H Company photo, late 1940s-early 1950s, donated by Howard Hontz."

The A&S was originally built to handle 6-foot gauge. On June 8, 1871, President Dickson recommended to the Managers of the D&H to place a third rail on the line to permit the handling of standard gauge equipment. On December 14, 1871, the third rail had been laid, and brought into use between Albany and Nineveh. The standardization of the gauge and the removal of the then unnecessary third-rail was completed by the end of 1876. (*Inspection of Lines*::, 1927, pp. 24-25)

Post card view of Nineveh Junction, purchased on E-Bay on July 15, 2016. Thanks to John V. Buberniak for bringing this post card to our attention.

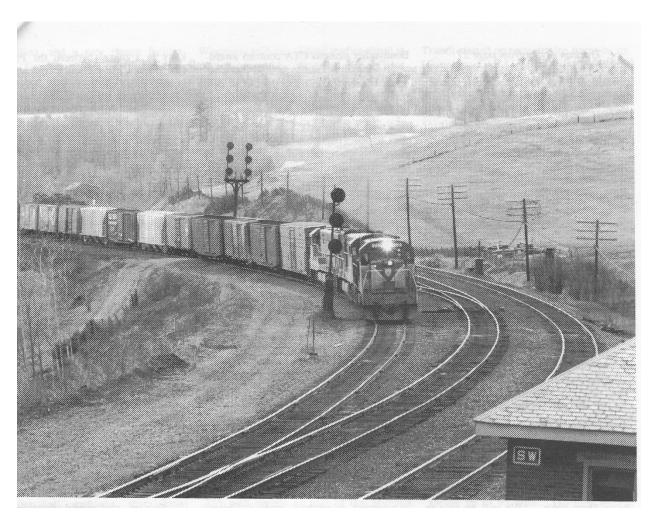


Nineveh Junction (where L&S and A&S came together)

Reverse of post card of Nineveh Junction shown above:



In the July 2016 issue of the *Bridge Line Historical Society Bulletin*, p. 33, there is a very nice photograph of D&H engine No 712 at the head of a freight train that is about to move from the Lackawanna and Susquehanna onto the Albany and Susquehanna at SW cabin at Nineveh Junction. Here is that photograph, with its *BLHS Bulletin* caption:



"NB/EB freight behind D&H 712 comes off the Penn Sub onto the Susquehanna Sub at SW Cabin in Nineveh, NY, May 1, 1971 photo by Hugh Strobel."

Envelope stamped "Nineveh Carbondale Agt. Aug 19"

Stamped by railroad agent. Purchased on E-Bay on November 8, 2016

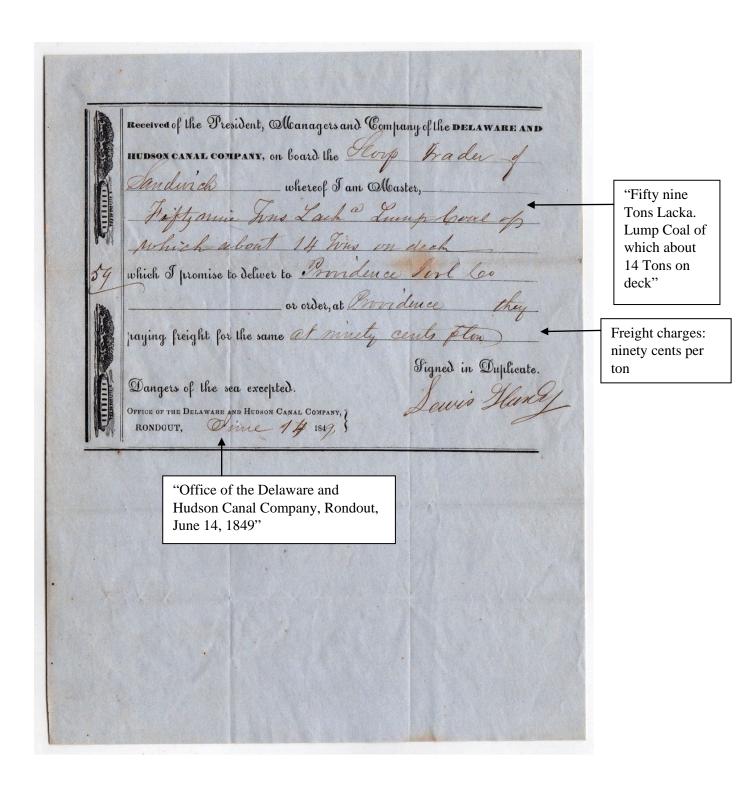


#### 3. Market Development: Coal sold to Providence Tool Co., Providence, Rhode Island, 1849

Shown below is a receipt, dated June 14, 1849, from the President, Managers and Company of the Delaware and Hudson Canal Company to the Master of the Sloop *Trader of Sandwich* for the transportation of 59 tons of D&H coal from Rondout to Providence, Rhode Island, to be delivered to the Providence Tool Co., Providence, Rhode Island. This remarkable document was sold on E-Bay on October 24, 2016. Our thanks to John V. Buberniak for bringing this document to our attention.

"Agent / Providence Tool Co / Providence / Rh. Isl.

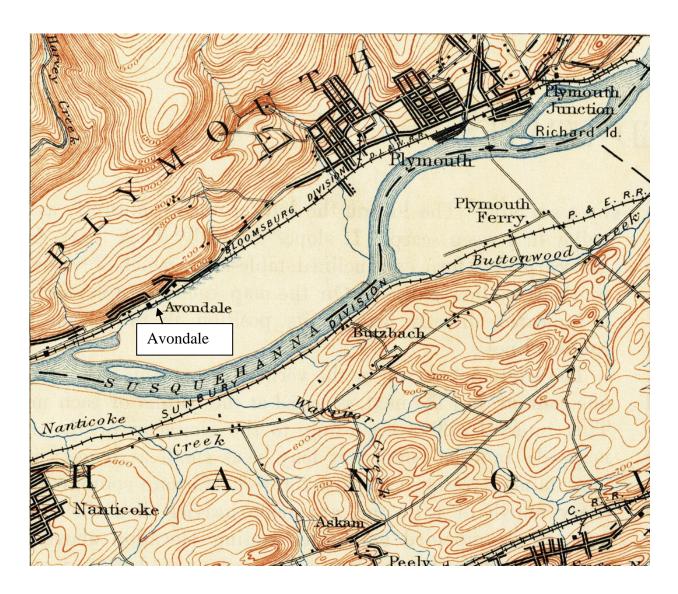




#### **Additions for Volume XIII:**

1. More on the Avondale Mine Disaster, September 6, 1869

The location of Avondale is shown on the map detail given below from *U. S. Geological Survey Map, Wilkes-Barre sheet, edition of April 1894, reprinted 1913.* Henry Gannett, Chief Topographer; H. M. Wilson, Geographer in Charge; Triangulation by S. S. Gannett and U. S. Coast and Geodetic Survey; Topography by M. B. Lambert. Surveyed in 1890-91.



Here is the account of the Avondale tragedy that was published in the *Carbondale Advance* of Saturday Morning, September 11, 1869, p. 2:

"THE AVONDALE HORROR. / COAL BREAKER AND SHAFT BURNED, The Miners and Laborers inside cannot be Extricated until they are Suffocated by Carbonic Acid Gas. / 108 LIVES LOST / It is our painful duty, and that of the press generally of our country, to record this week the most appaling [sic] calamity that has ever occurred in the coal regions of America. / The horror occurred in this county, thirty-eight miles down the valley from Carbondale, twenty-two miles below Scranton, and six miles below Wilkes-Barre. / The full details of the calamity would more than fill our columns but the most important facts will be found below, taken mainly from the excellent report furnished in the Scranton Morning Republican: / Yesterday morning about ten o'clock, fire broke out in the Avondale Colliery, (Steuben Coal Co.,) leased by the D. L. & W. R. R. Company, and situated a mile below Plymouth. It was first seen by those outside, when up at the head of the cracker, or stack, to which it had run from the foot of the shaft, 237 feet from the surface. / CAUSE OF THE FIRE. / The best authorities decide that the fire must have been communicated from the ventilating furnace, fire having been kindled with wood yesterday morning. Considerable heat had been noticed near the hoisting apparatus, so much so that the engineer could not oil the shieves. / PROGRESS OF THE FIRE. / The fire burned so rapidly that the engineer, Mr. Alex. Weir, was driven from the engine room soon after, having had time merely to blow the whistle and fix things secure, so that there would be no danger of explosion. As the fire passed up the shaft and into the breaker, it rushed into the engine room as stated, the engineer not having time even to secure his hat. In an almost incredibly short time the entire works were one mass of flame entending [extending] up the breaker, which is situated on the side hill, fifty or sixty feet higher than the Bloomsburg R. R. track, and running down the cracker and picker rooms and chutes, to the track. / THE SIGHT. / The fire when thus in full progress, was grand beyond description. Imagine a plane of fire running up one hundred feet at an angle of thirty-three degrees and then almost perpendicularly into the air another hundred feet, while dense clouds of smoke enveloped all surrounding objects, and a faint idea will be had of this magnificent spectacle. / IN THE MINE. / Before proceeding further, it will be necessary to say that while this was the scene above ground, Two Hundred and Two human beings, miners and their laborers, were in the bowels of the earth beneath this mass of fire, to all intents and purposes buried alive, and with the faintest prospects of ever getting out alive—and the scene above will be better appreciated. / WEEPING AND WAILING. / Surrounding the fire on every side, were hundreds of men, women and children, the female portion of whom were making the air resound with their frantic cries of distress. Wives were wringing their hands and wailing 'Oh! My Jimmy;' 'God have mercy;' 'Who'll take care of my children?' and using every form of expression of endearment and of woe. Mothers were crying out for their sons, as only mothers can cry, and only as mothers do. No persuasion, entreaty, advice, or consolation, served to quiet them. This continued for at least an hour, when they became quieter, as they saw efforts making to extinguish the flames, and the rest of the day the outbreaks were less frequent, although it was heart rending to see individual cases of overmastering grief, which were exhibited among the cabins of the miners. / THE

MINERS HOUSES. / During the early progress of the fire, great fears were entertained that all the miners' houses, which are situated on the side hill, both ways from the fire, would be consumed. The heat was intense, but providentially the wind blew up the hill directly in the line of the fire, burning only the forest trees, which blazed away like writhing fiends. The women, however, removed all of their household goods from their tenements, and in this way for a time forgot their grief. / The House of Mr. Conrad Lee, Outside Superintendent, was nearest the fire, and was in great peril, but escaped with the rest. None of the furniture was removed from here, and by Mrs. Lee's well directed efforts, a stream of hot coffee ran from her house, for the use of the hard worked men. / WORK AT THE FIRE. / As soon as the fire began to be visible to the surrounding country and to the neighboring collieries, men began to flock toward the burning breaker. One of the first to arrive was Mr. Case, Superintendent of the Grand Tunnel Colliery, who from thenceforth was a leading spirit in the work of organization. All day long he worked assiduously, being conspicuous by his stentorian voice calling for volunteers to man the engine brakes, and by his costume, a check shirt outside of the other clothing. Before his arrival Superintendent Lee was working with all his might, his first care being to remove the blasting powder from immediate proximity of the fire, to a place of safety. He also telegraphed to Scranton, Kingston, and Wilkes Barre, for fire engines and other assistance. Both of the gentlemen named were assisted by Mine Superintendent Phillips in the work of organization. They mustered a bucket company and formed a line from the tank about fifty rods distant, and thus poured water on the most exposed places. / THE KINGSTON ENGINE. / The first fire apparatus to arrive was the hand engine Luzerne, from Kingston, accompanied by a full complement of men and by Master Mechanic Chas Graham, of L. & B. railroad, with a force of men from the railroad shops. This engine was hauled up the hill to within a few feet of the cracker, and was at first fed with buckets from the tanks and subsequently from several wagons which continually hauled casks of water to the spot. These were kept running all the afternoon. / GOOD WILL OF WILKES BARRE. / Soon he Good Will hand engine, from Wilkes-Barre, arrived at the scene, on a platform car. This did not get to work for some time owing to want of water. It did not leave the railroad track. This was accompanied by a large force of men, and by Stanley Woodward, esq., Chief Engineer, who was obquitous [sic] during all the subsequent operations. This engine for a time supplied Nay Aug steamer from Scranton, with water, but it was found insufficient—when it stretched its hose to the fire and worked well in subduing the flames. / NAY AUG STEAMER. / This steamer arrived on the ground about one o'clock. It was accompanied by Foreman S. B. Stillwell, President James Ruthven, engineer Blackwood, and about a dozen members. As soon as possible after its arrival, it was disembarked. With it went down 400 feet of hose. As much of this as was needed was run up the bank to the stone wall (30 feet high,) and was hauled to its top, and stretched to the mouth of the shaft, which was encumbered with burning timbers and all manner of debris. Water was first obtained from Good Will, of Wilkes Barre, and played into the mouth of the shaft, but when this supply was found insufficient, the engine was let down the bank below the railroad, where, in a swail [swale], is a stream of water, usually copious, but then very scanty. A cask was here sunk, and from that time

she took suction from that spot. / OPENING OF THE TUNNEL. / At the foot of the thirty feet wall is the mouth of a tunnel which runs through the coal to the shaft, tapping the latter fifty or sixty feet from the surface. The mouth of this tunnel had been choked up with coal, falling timbers and other debris and after the fire in its vicinity had been put out, men were set to work to open it. This was effected shortly after four o'clock. At 4:20 Nay Aug's hose was let down the bank and carried into the tunnel, the far end of which was a mass of blazing ruins. It was not a large time before the hose was advanced to the shaft opening, when the boys were able to turn their powerful stream into it. By five o'clock the fire was so far distinguished [possible "extinguished" was intended] that men above could commence clearing away the rubbish at the top of the shaft. / THE DERRICK. / While all these other efforts had been making, Mr. S. D. Kingley, Boss Builder, of the D. L. & W. R. R. Co., had a force engaged in rigging a 'horse power,' with which to work a derrick over the shaft. He had about 600 feet of rope and all other necessary appurtenances ready by the time the derrick was completed and raised. This derrick was built and rigged under the management of Mr. Kingley, Mr. Stackhouse, John Powell (Inside Boss at Taylorville,) Charles Graham, and 'Billy' Paterson, once a sailor, and one of the hardiest and most faithful men about the works. / THE AVANT CURRIER. / At ten minutes to six o'clock, everything being ready, a dog, inclosed [sic] in a box with a slat top, was let down the shaft, together with a lighted lamp, for the purpose of ascertaining if it was safe for a man to go down the shaft. If the dog came up alive, it would be proof that the air was not too hot and too foul for breath. He was let down as far as the box would go for the obstructions in the pit, when, at six o'clock, the box was hauled up, the dog was found alive, and the first sentiment of relief was experienced since the fire commenced. / HALLOWING DOWN THE SHAFT. / While the dog was down the shaft, quiet was requested, and a number of men who were at the mouth of the tunnel, hallowed down the shaft in the hope that an answering sound would be heard from the imprisoned men. Many in the tunnel and above ground thought they heard answer, 'All right,' and immediately cheer after cheer went up from the assembled multitude. / SHOWERING THE CROWD. / After the dog was hauled up, efforts were made to call to those below, but there was so much confusion around the mouth of the shaft, so many people being gathered there, and all being so anxious to see what was going on, that it was impossible. A policeman, and others, made every effort to get the people back, but all to no purpose. It was finally thought advisable to turn a stream of water upon the crowd to drive it away. This was accordingly done with Good Will's hose. There were many ludicrous happenings at this time, but the impression of bystanders was that of sorrow that such violent measures were resorted to. A large number of people were badly drenched. / ANOTHER HALLOO. / When quiet was again restored, another loud call was made. Breathless silence was observed by the vast concourse, numbering thousands, but no answering voice was heard, and hope died away. / A MAN DESCENDS. / Preparations were at the same time making to send a man down to reconnoiter. A volunteer was called for. / All honor to Mr. Charles Vartue, of the Grand Tunnel colliery who immediately signified his intention of making the attempt to reach his perhaps dying and mayhap dead fellow-miners. This noblehearted man, who is about thirty five years of age, taking his life in his hand, hooked on his

lamp, and stepped forth to the sacrifice, if such his descent should prove. A bucket was rigged, and he stepped into it, provided with a lantern, a bucket of coffee, a wet towel, and a signal rope, by which to give notice when he wished to ascend. / 6:30 P. M.—The descent commences. After going down a few feet it was found necessary to change the programme a little. He was hauled up again, and his lantern fastened to the signal rope, and it was then let down simultaneously with Mr. Vartue's second attempt (which was commenced at 6:34,) and within his reach. / 6:41 P.M. –Signal from Vartue to be drawn up. In three minutes he reaches the top of the shaft. / VARTUE'S STORY. / Mr. V. reports, that about half-way down the shaft he found obstructions, and although there was an opening large enough to go through, he feared to go down, supposing that if he did, the debris would fall upon him. The brattice work around the shaft was not much burned. He reported the air perfectly good and not much heated, but that two men would have to go down, as they could work together to good advantage/ MORE VOLUNTEERS. / It was thought best to send down fresh men, and accordingly Charles Jones, of Plymouth, and Stephen Evans, of Nottingham shaft, volunteered. / THEIR DESCENT. / 6:53 P. M. -The two men were provided with a hook and a hatchet, and some other contrivances, and started down. They gave signals to stop, two or three times, and were apparently engaged in clearing away obstructions. 7:02 P. M.—Signal to slack off. They were then seen from above to be at the bottom, and to get out from the bucket. A season of suspense followed. / 7:08 P.M. -A smothered sound is heard, as of heavy pounding some distance from the bottom of the shaft, and it was supposed above that it was upon brattice work built to close up the gangway by the buried men, and thus prevent the entrance of fire and smoke. / 7:12 P. M.—Signal to come up. / 7:15 P.M.—The men emerge from the mouth of the shaft. / THEIR REPORT. / As soon as Jones and Evans got breath, they reported that they went 70 ore 80 yards into a gang way, finding three dead mules as they progressed. They finally came to a closed door, upon which they pounded, waiting breathlessly for an answering sound from the unfortunate men. But alas! Alas! no sound came, and they felt compelled to return, first having noticed that a cloud of sulphur was pouring out through the crevices in the wood-work of the door. They did not attempt to break down the door, fearing that the sulphur would overpower them in their partially exhausted condition. They discovered another gang way running in another direction, into which the fresh air appeared to be rushing. Jones desired to enter this, but Evans refused, and the former thought it not prudent to explore it alone. / AVONDALE, Sept. 7, 8 P. M. SCRANTON, 11 P. M.—The great disaster foreshadowed in the dispatches of yesterday, has become a certainty. The miners are yet entombed, and scarcely a hope remains that a single one of them will be found alive. At first it was supposed that 200 men were in the mine when the fire broke out but later investigations have shown that the number was exaggerated. Not less than 138 nor more than 150 men and boys were in and down the shaft at the time. There are fifty-nine chambers in the mine, and in each of these chambers are one miner and one helper, but as some of these men, it is known, were not at work, one hundred is the number allowed for miners and helpers. There were in addition nine drivers, nine door boys, eight gang way men, one oiler, one boss mule-driver, one rodman, one roofman, one footman and six extra hands. This places the number shut up at 138. 5:15 A. M. Wednesday, Sept 8<sup>th</sup>. G. D. Davies, Thomas Williams, S. Davies, and William Smith

went down and were gone thirty-five minutes, and discovered dinner cans and cups. / At half past six o'clock, R. Williams, D. W. Evans, John Williams went down and were gone thirty minutes, and discovered the whole lot of men dead on the east side of the Plane. Preparations are making to send down six gangs of four men each, and the bodies will be brought out as rapidly as possible. The foul air does not interfere to any great extent. / At half past seven, one of the gangs which had just returned, say that they went up the plane, just beyond which a barrier was met, consisting of a car packed around with coal, culm, and clothing. This was cleared away, and proceeding a little farther, another barrier was met, nearly completed, constructed as the first. One man was found upon the outside, where he was at work in laying up the wall. All was completed save a small aperture just sufficient to admit of the passage of a human body, and it is to be inferred that he had just finished his task, and was preparing to join his fellow sufferers upon the opposite side of the barricade, by crawling back. The barrier was removed, when the whole force was found congregated, together, and piled one upon the other, dead. / No hope remains of a single life out of the whole vast number. Active preparations are going on for the instant removal of the bodies, which at best, with the poor arrangements for hoisting, will take the greater part of the day. The condition of the mine is constantly improving. / At quarter after eight, Coroner Eno, of Plymouth, who is on the ground, has just empanneled a jury as follows: / W. J. Harvey, foreman, Samuel Van Loon, Martin McDonald, James George, Charles Hutchinson, and Thomas Patton. / They will view the bodies as they are brought out. / 8:40. / John Bowen, of Plymouth, a miner, was the third man brought out. He is thirty-one years of age. His left eye is partly open, but otherwise his countenance is at rest. John Bowen formerly lived in Providence, now of Plymouth. He leaves a wife and one child. He was found outside of a barricade, behind which were all the other men. He was evidently overcome before he could get through. / E. C. Wadhams stated that the name of every man would be announced as fast as they were brought out, when the relatives will be allowed to enter the lines. / The jury have just viewed the remains of Steele and Slocum, and held their inquest. Those who bring out each body are sworn as to the fact. / E. L. Merriman and H. B. Payne, lawyers of Wilkes-Barre, are attending the jury. / Father O'Hara, of Wilkes-Barre, has arrived on the ground. / 9:10.—The fourth man exhumed was William Powell, of Plymouth. / The fifth body rescued is that of Wm. Williams, a boy of Hyde Park, about 14 years of age, who had only worked here one day. / The sixth body brought out was Matthew Evans, of Steuben Colliery. He appears to have died in great agony, with hand clenched. / The seventh body was Wm. Evans, a brother of Matthew. / Wm. Halliday reports boy in the arms of his father. / He went to the head of the east gangway, and saw sixty-three (63) men and boys lying together, nearly all without shirts, and lying as though they died without much agony. The rest of the men are not yet discovered. / The eighth body, that of Evan Hughes, inside boss, was found sitting down, with his head forward on his knees. His watched had stopped at 5:15. This is supposed to have been Tuesday morning, as the miners usually wind their watches at night. / ELEVEN O'CLOCK.—a barrel of lime has just been sent down to mark the path way to the chamber where the men lie, for the reason that two men lost their way this morning. / The boy supposed to be Matthew Evans turns out to be Willie

Phillips, cousin of Mrs. Captain Blair, of Hyde Park. / The eleventh body is that of John Clark, of Jersey Hill, Plymouth. He leaves a wife and seven children. /TWELVE O'CLOCK.—The twelfth body is that of Wm. J. Evans, of Turkey Hill, leaves a wife and two or three children. Face at rest. / The thirteenth body is Geo. Stackhouse, of Avondale, driver, aged 17, unmarried. / 12:25.—The fourteenth body is Edwin Jones, of Hanover. He leaves a wife. His head is thrown back, and his tea can slung around his neck. Found among the 60. / The ninth body has been recognized as Jacob Mosier, of Plymouth. He leaves a wife and child. / No. 10 is recognized as Peter Conlin, of Plymouth; had a wife and three children in England. / 12:27.—The fifteenth body is Morgan Watkins, unmarried, of Plymouth. / The sixteenth body is Andrew Frothingham, of Avondale; leaves a wife. / 12:58.—The seventeenth body is William Allen, of Hanover; has a wife soon to be a mother; face covered with fresh blood. / The eighteenth body is Thomas D. Jones, formerly of Providence, now of Avondale. He has a wife and widowed mother. / ONE O'CLOCK, P. M .. - Wednesday. - The nineteenth body is Peter Johnson, of Plymouth. No family; found with the 60; a powerful man; face at rest; left arm and side much swollen. / 1:45.— The twentieth body is that of Evan Hughes, inside boss. Belonged at Plymouth; mouth and eyes open; brother of Benj. Hughes, of Scranton; leaves wife and three children. / The twenty-first body was Wm. Bowen, of Avondale; wife and one child; no shirt on; body very red; head on one side. / The twenty-second body was James Powel, son of William Powel. / The twenty-third was Thomas Hughes, Welsh Hill, Plymouth. / The twenty-fourth corpse was Wm. Reese, Cold street, Plymouth; wife in old country. / The twenty-fifth body was Wm. Porfit, Cold st., Plymouth. / The twenty-sixth body was Wm. N. Williams, Plymouth. / The twenty-seventy body was Wm. Lewis, Plymouth. / The twenty-eighth body was John Hughes, Plymouth. / The twenty-ninth body was Thomas Morris, Plymouth; wife and four children. / The thirtieth body was Elijah Bryant, Avondale; inside carpenter; wife and one child. / The thirty-first body was Thomas Roberts, son of John Roberts, Plymouth, Turkey Hill; single. / The thirty-second body was Wm. Sink, single, Avondale. / The thirty-third body was Daniel Jones; shirt around his neck; Plymouth. / The thirty-fourth body was David Thomas, cousin of two who have been brought out; Plymouth; single; parents in old country. / The thirty-fifth body was Daniel Givens, boy. / The thirty-sixth body was Evan Rees, Plymouth; wife and child in Wales. / The thirty-seventh body was that of Edward W. Edwards, Plymouth (Cold street), wife and one child. / The thirtyeighth body was Henry Morris. / The thirty-ninth body was William T. Williams, Hyde Park, age 39. Wife and one child. / The fortieth body was David S. Reese (Cold street). Wife and four children. / The forty-first body was Richard Wooley, boards with John E. Jones, Plymouth, (Turkey Hill.) / The forty-second body is John R. Davis, Plymouth, formerly of Pittston. / The forty-third body was David James. Body and face pale; eyes open; Kingston. The forty-fourth body was Wm. Evans, son of Wm. R. Evans, in mine. / The forty-fifth body was Wm. Williams, (shoemaker) Plymouth, Main Street. / The forty-sixth body was Richard Owens, Avondale; wife. / The forty-seventh body was Willie Hetton, about 10 years old. / The forty-eighth body was Wm. Evans, Avondale, uncle of Wm. E. Davis; age 51, Driver Boss. / The forty-ninth body was James Powell, Plymouth, (Turkey Hill); single / The fiftieth body was Thomas Hatton, father of

the boy Willie; Plymouth (Turkey Hill.) Wife and two living children. / The fifty-first body was Edward Owen, Baltimore, Md.; boarded with Mrs. W. Morgan, Plymouth; wife and family in Baltimore. / The next two brought up (fifty-second and fifty-third) was a father and son named John Burch and John Burch, Jr. formerly of Providence. The father was tightly clasping his son in his arms, wife and three children. / The fifty-fourth body was John Jenkins; boarded with Evan Hughes, Inside Boss. / The fifty-fifth body was son of Wm. R. Evans, the second son of Mr. Evans brought out. / The fifty-sixth body was Daniel Wood; wife and two children, Lives in Plymouth. / The fifty-seventh body was Wm. Moses; about 14. Plymouth, Cold St. / The fiftyeighth body was David Reese, jr., Plymouth, Cold st. Father and brother brought out dead. / The fifty-ninth body was Griffith Roberts, Plymouth (Turkey Hill). / The sixty-first body was Joseph Morris, Gaylord avenue, Plymouth. [61<sup>st</sup> reported before 60<sup>th</sup>] No. 60 was recognized as John Ruth, of Hanover; wife and one child. /The sixty-second body was Patrick McGurick; wife and three children; wife pregnant. / The sixty-third body was Henry Smith of Avondale; wife and three children. / The sixty-fourth body was Shem Howells; name on arm. / The sixty-fifth body was Thomas Davis. / The sixty-sixth body was William Dowdle, of Avondale; single. / The sixty-seventh was John Roherty; single. /The sixty-eight was Thomas Ryan. / The sixty-ninth was Hugh Gilroy, son of Patrick Gilroy. / The seventieth body, John Maher, of Avondale; age 40. / The seventy-first body was Patrick Burk; his face was red, his hands clenched and his tongue between his teeth; lived Plymouth. / The seventy-second body was Wm. T. Morgan, of Plymouth. / The seventy-third body was James Murray of Avondale; wife and two children. / The seventh-fourth body was Michael Daly; wife and four children. / The seventy-fifth body was D. P. Pryor, of Avondale; wife and two children. / The seventy-sixth body was James Phillips, Turkey Hill, Plymouth. / The seventy-seventh body was James Williams, Plymouth; wife and two children. / The seventy-eighth body was John D. Evans, brother in law of John S. Williams. / The seventy-ninth body was William Harding, Plymouth, came from Hyde Park. / The eightieth body was William R. Evans, Avondale; wife and four children, three of whom, boys, were in the mine and brought home dead. / The eighty-third body was William Wildrich, of Hanover; leaves wife and four children." (Carbondale Advance, Saturday Morning, September 11, 1869, p. 2)

"THE VERY LATEST. / This (Friday) morning's reports from Avondale, state that 108 bodies have been brought from the mine, and after a thorough search no more can be found. It is believed that this embraces the full list of victims." (*Carbondale Advance*, Saturday Morning, September 11, 1869, p. 2)

#### James M. Corrigary's Account of the Avondale Tragedy

Given below is the list of the names of the victims of the tragedy in the order in which they were brought out of the mine. This list is from the very complete account of the Avondale disaster that was written by James M. Corrigary, an account that is in the Mine Safety and Health Administration Library in Denver, CO.

"William Powell, of Plymouth (Turkey Hill). Eyes both open and head turned to one side, wife and several children in the old country. One daughter lives in Plymouth, and one son is dead in the mine.

David Jones, who sacrificed his own life in an effort to rescue his fellow miners on Monday night, was buried at this time, ten o'clock a.m. the fact being announced to the crowd. It was at the same date stated that the funeral of the late Thomas Williams, the other martyr to his efforts to ascertain the fate of his friends in the mine, would be buried at three o'clock p.m., from the late residence in Plymouth.

At this time Mr. William Halliday, of Pine Ridge, was brought from the mine greatly overcome by the foul air, and required the attendance of several physicians some time before he was restored.

The next brought out was George Williams, of Hyde Park, a boy about fourteen years of age who went to work at Avondale for the first time on Monday.

Willie Phillips, a promising boy of ten summers, and Methusalem Evans (one of three boys found in his father's arms), were brought out on a bier. Both of these boys had their hands tightly clenched, and their faces were much distorted. The former was a son of Mr. William Phillips, who resides near Nottingham Shaft below Plymouth. His brother Thomas also in the mine.

Operations were now suspended for a time for the purpose of securing better ventilation, and when resumed, the body of Edward Humphrey was brought to view. He left a wife to mourn his loss.

The next body was not at first recognized, but was subsequently ascertained to be that of Jacob Mosier of Plymouth, who left a wife and four children. He was found side by side with a companion, in a breast in the western portion of the mine, and a long way from his other companions. He was lying on his face, which had apparently been forced into the ground, and was much disfigured.

Peter Conlan's remains next appeared. They were found lying by those of Mosier. His wife and four children are in England.

John Clark of Plymouth (Turkey Hill). He had no shirt on. His right arm was raised and bent toward the right breast. He evidently died hard. He was found apart from the rest. Wife and six children.

William J. Evans of Turkey Hill. Face at rest; he lay among the sixty-seven. Wife and two children.

George Stackhouse of Avondale, driver, age seventeen. Head on one side; right hand raised though affirming, left arm doubled and fist clenched. Single.

Edwin D. Jones of Hanover. Head thrown back, and tea-can slung around his neck. Found among the sixty-seven. Wife.

Morgan Watkins of Plymouth. Unmarried.

Andrew Frothingham of Avondale. Head was on one side; eyes and mouth staring wife open. Wife.

William K. Allen of Hanover. Face covered with fresh blood; wife soon expects to be a mother.

Thomas D. Jones, formerly of Providence, now of Avondale. Left a wife and widowed mother.

One o'clock Wednesday morning the body of Peter Johnson of Plymouth was viewed. A powerful man; face at rest' left arm and side much swollen. Single.

The twentieth body brought out was that of Mr. Evan Hughes, Inside Boss, who lived at Plymouth, his mouth and eyes wide open, brother of Benjamin Hughes of Scranton. Wife and three children.

William Bowen of Avondale. No shirt on; body very red, head on one side. Wife and two children.

James Feare, no shirt, body and head very red, nose bloody and head on one side. Single.

Thomas Hughes, Walsh Hill, Plymouth; face very red; arms limp; fists clenched. William Reese, Coal street, Plymouth. His stepfather and brother were both in the mine; arms raised as though boxing; hands clenched; evidently died in agony. Wife in old country.

William Pharfit, Coal street, Plymouth. Body and face purple; head on one side; shirt off. Wife and two children.

William N. Williams, Plymouth (Turkey Hill). Face bloody. Wife and three children.

William Lewis, Plymouth (Turkey Hill). Head thrown entirely back and very red; arms crossed above the body, as though fending.

John Hughes, Plymouth (Turkey Hill). His head was thrown back, and his eyes were staring wide open. Wife and one child.

Thomas Morris, Plymouth; face at rest. Wife and four children.

Elijah S. Bryant, Avondale; Inside Carpenter; arms crossed on breast. Wife and two children.

Thomas Roberts, son of John Roberts, Plymouth (Turkey Hill); face on one side; arms across breast. Single.

At this time, half-past three p.m., it was found necessary to call on Sheriff Rhodes to appoint a posse of Deputy Sheriffs to preserve order, the crown having become so great that it was found very difficult to control them. A force of special policemen was also ordered from Scranton.

William Sink, Avondale; face on one side and pale; arms crossed on breast; lived in Plymouth. Single.

Daniel Jones; shirt around his neck; Plymouth (Turkey Hill); face distorted; body very red. His brother had previously been brought out. Family in England.

David Thomas, cousin to two who have been brought out; Plymouth; parents in old country; boarded with Evan Hughes; fact and body pale. Single

Daniel Givens, boy. Face pale; foam oozing from mouth; age 17; car runner; parents at Kingston (East Boston); boarded with William Phillips, Plymouth.

Evan Ross. Body discolored; face turned to one side; blood and foam issuing from mouth; Plymouth (Turkey Hill); boarded with Samuel Morgan. Wife and child in Wales.

Edward W. Edwards. Plymouth (Coal street); head horribly bloated; discolored and bloody; thirty years old. Wife and one child.

Henry Morris. Boarded with Samuel Morgan, Plymouth; face bloody and arms limp and stiff.

William T. Williams, Hyde Park, age 39; boarded with William Evans, Plymouth; son brought out this morning. Wife and one child.

David S. Reese, Plymouth (Coal street). Wife and three children; one son brought out dead; another in the mine; face discolored and bruised; arms stiff and raised before him.

Richard Woolley; boards with John E. Jones, Plymouth (Turkey Hill). Face and body very red; shirt off. Single.

John R. Davis, Plymouth, formerly of Pittston. No shirt; body red; arms stiff and raised; father-in-law of William Williams.

David James; body and face pale; eyes open; no shirt on; of Kingston; boarded with aunt, Mrs. Phillips, Plymouth, worked four days. Wife and child.

Lewis Evans, whose two brothers and father, William R. Evans, were in the mine. Mother and sisters all that are left on the family.

William Williams (known as shoemaker), Plymouth, Main street; age about 40. Face on one side with peaceful appearance. Wife.

Richard Owen, Avondale, Wife.

Willie Hatton, about ten years old. His father is down in the mind dead; Plymouth (Turkey Hill); face pale, looks as though sleeping. It is said that this little fellow did not work in the mine, but that his father took him in with him that fatal morning' according to a promise made by him some time previously.

William Evans, Avondale, uncle of William D. Davies, age fifty-one; Driver boss. Face at rest. Wife.

James Powell, Plymouth (Turkey Hill); single; father brought out dead previously.

Thomas Hatton, father of boy Willie, Plymouth (Turkey Hill). Wife and two children. Face red, bloated and turned to one side.

Edward Owen, Baltimore, MD; boarded with Mrs. William Morgan, Plymouth; face pale and at rest

John Burch and his twelve year old son John Jr., were brought out together, and exactly as found in the chamber of death. The father's left arm was clasped around his boy, and both looked as if they had slept their lives away. They lived in Nottingham shaft, near Plymouth, though Formerly from Providence. Mr. Burch left a wife and four children.

John Jenkins; boarded with Evan Hughes, Inside Boss, at Plymouth.

William Evans, second son of William R. Evans, another of the Evans family. He was quite young.

Daniel Woods; wife and two children. Lived at Plymouth.

William H. Nauss, aged about fourteen. Lived at Plymouth (Coal Street).

David Reese, Jr., Plymouth (Coal Street). Father and brother brought out dead. Mouth all bloody; tongue between teeth. Single.

Griffith Roberts, Plymouth (Turkey Hill); boy; lived with parents; brother Thomas also in the mine.

C. F. Ruth, of Hanover; face pale; head turned back as though gasping for last breath.

Joseph Morris, Gaylord ..... Plymouth. Face pale; foam issuing from mouth. Wife.

Patrick McGutck; wife and three children; wife pregnant; face of the corpse pale and peaceful; belonged at Avondale.

Henry Smith; of Avondale. Wife and four children. Hands clenched as though guarding against a blow; shirt up around his neck; face quiet.

Chern Howell; name in illegible ink on arm; two fingers off. Lived at Walsh Hill, Plymouth. Wife and four children. Eyes closed, mouth open.

Thomas Davies, uncle of Thomas Morris, Plymouth. Family in Wales.

William Dowdle of Avondale; single; boarded with Patrick Knowles, hands tightly clasped; commenced working Monday; formerly of Poke Hollow; brother in New Jersey.

John Roberts; single; recognized by one stiff finger on the left hand; body bloated.

Thomas Ryan, who boarded with Mr. Walton of Avondale; recognized by his two brothers, who were fearfully affected; went to Avondale from Harvey's; right hand above head; left hand raised and clenched.

Hugh Gilroy, son of Patrick Gilroy, (who recognized him, as also did a brother); wife and one child.

John Maher, of Avondale; age forty; recognized by his brother; face at rest; eyes closed. Wife and one child.

Patrick Burke, of Plymouth; single man; had sister living in Scranton; face very red; tongue between teeth; left arm raised; hand clenched; one of six found in chamber together.

William T. Morgan, of Plymouth; face much distorted; mouth open; right hand raised and clenched; recognized by a nephew.

James Murray, of Avondale; wife and three children; face pale; both hands raised and clenched; came Tuesday from Harvey's.

Michael Daly, brother-in-law of James Keating, who recognized him; of Avondale; wife and five children; he was found alone on the mine truck about one hundred feet from the mouth of the shaft.

When coming up the shaft with Mr. Daly's body, Mr. Edward Connell fell back exhausted upon it, and was with difficulty prevented from falling back down the pit. It was five hours before he was fully restored. Another member of the relief was also slightly overcome.

D.P. Pryor. Marked on arm with cross and D. P. P.; of Avondale; wife and two children; face on one side; foam issuing from mouth; he was brought up at half past nine o'clock and was the last of those discovered up to that time

From ten o'clock until shortly after midnight, no more bodies were recovered. The increasing foulness of the air, and the necessity of which persisted for another exploration of the mine, created the delay which was much increased from the fact that the reliefs refused to explore until a physician could be summoned. That night there was hideously dark-thunder, lightning and rain prevailing, and most of the crowd returned to their homes, though some remained, waiting anxiously for further developments. The burning coal, sending up blue curling flames, the scores of miners with lamps in their hats; as many men with lanterns flying about; the group of men about the tunnel with lights; the reliefs bringing out the biers with their fearful loads of dead humanity; the thick darkness; all combined to make a scene seldom witnessed in the mining community. Add to all this the shrieks of women and the crying of men as victims were brought up (the relief party carrying) the men from the pit of death; the puffing of the donkey engine as it forces air into the shaft, and some idea of the terrible carnage can be gained.

An exploring party shortly before eleven o'clock reported seven found. Shortly afterward another party reported the finding of two men, also two mules on the west side.

Thursday morning: 11th before one o'clock, James Phillips, of Plymouth (Turkey Hill) was brought up; boarded with Samuel Morgan; face bloody and discolored, came to America two weeks before companion; neck smoked and chin burned, apparently from his lamp, which had evidently fallen from his head. Wife in Wales.

At half-past twelve o'clock thirteen more bodies were reported found in groups, the largest numbering six.

James Williams, of Plymouth, brought out. Wife and one child. Face bloated and covered with blood; eyes closed; mouth partly open; body very red; boarded with brother-in-law Thomas Morgan; came from Schuylkill.

John D. Evans, brother-in-law of John E. Williams; lived at foot of Jersey Plane, Plymouth; a morbid spectacle; head thrown back, mouth open, and face covered with white froth; left arm drawn up and hand clenched. Wife and five children.

More men reported to be at the bottom of the plane, on the west side, where (there was) evidence that a brattice was commenced but not finished, the men perishing no doubt before it was done.

William Harding, Plymouth; uncle of Isaac Williams; came from Hyde Park. Wife.

Samuel R. Morgan, Plymouth (Turkey Hill); head turned to one side, and arms folded as if resigned to his terrible fate. Left a wife and two children.

William R. Evans, Avondale, father of the three dead boys; wife and little daughter left.

William L. Wildrich, of Hanover; left wife and five children; his mouth was partly open.

Rouse Lunley (Reese Lumley), of Turkey Hill, head thrown back and arms stiff above his head. Wife and three children.

Thomas Llewellyn, of Plymouth; single; one brother dead in mine.

Rouse Llewellyn, brother to proceeding. Single.

William Davies, Plymouth, boarded with Thomas Phillips. Wife and children in old country.

John Thomas, Plymouth, wife and one child; horrible sight; head thrown back and mouth open; nostrils discolored; identified by scar on body.

John Davies, Plymouth; formerly of Pittston; son of John R. Davies previously brought out; mouth and face bloody and glossy; began to work at Avondale on Monday.

William T. Williams, Plymouth; wife and one child; brother-in-law of last man brought up; mouth and face a little bloody; left arm drawn up.

William D. Jones, Welsh Hill; boarded with Michael Howell; mouth open; hand closed. Wife and four children in Aberdene (probably Aberdare), South Wales.

Another exploring party having been down about forty-five minutes, found nine more bodies in one place not far from the last found.

Dennis Guyton, of Avondale; horrid object; face bloody and frightful; held tobacco pipe in left hand; both arms stiff above his head and all black with smoke and dirt. He laid in the mine with his face down. Wife and seven children.

William H. Reys, boarded with Kirk Owens, Avondale, very bloody about the nose; hands clenched. Wife and children in Mouth (Monmouthshire), South Wales.

William Spright, of Plymouth; arms raised. Wife and five children.

John Harris of Avondale. Wife and four children.

Thomas I. Jones, of Plymouth. Bloody about the nose and neck. Wife and two children.

Thomas Phillips, of Plymouth. Brother of Willie brought out previously, aged nineteen. Head swollen and face flushed, mouth open and blood about it. Single.

Lewis Davies. Boarded with Evan Hughes. Face bloody and bloated; breast also. Single.

Charles Fears, head and face flushed, Boarded with William Phillips, of Plymouth.

John Thomas, Plymouth. Boarded with his brother Isaac. Mouth open. Aged seventeen.

David Johnson, Plymouth. Wife and one child.

Mr. J. was the last man found at this time, six o'clock a.m., Thursday. Half an hour afterward, a party of six men reported no more men on the east side. Half an hour later eight men were found on the west side of the mine.

James Mallon, Plymouth, brought up. Boarded with James Derwin, his brother-in-law. Single.

James Harkins, Avondale. Mouth open and eyes partially closed. Wife and three children.

William D. Jones. Face bloated and arms extended over his head. Wife in Merthyr Tydfil, South Wales.

Edward Taylor, Avondale. Face and neck very red in blotches. Wife and one child.

Another crowd of people began to arrive about eight o'clock. At this time a new rope was placed upon the hoisting apparatus, the old one having become worn.

At half past nine o'clock, Benjamin Hughes, Thomas Carpon, Thomas D. Davies, George Morgan, and J(???) Williams went down to the east gangway, to endeavor to discover what caused a defect which had become apparent in circulation. Mr. Davies returned forty minutes afterwards and reported that a canvas brattice was to be placed across the east gangway to make a shorter draft.

At ten minutes to six o'clock, the names of Daniel Edwards, Madison Alabough, John Powell, of Avondale, and Rowland Jones of Plymouth, were reported as those men whose bodies had not been recovered.

At noon a committee headed by Mr. Benjamin Hughes, General Inside Foreman of the D. L. & W. RR. Co's mines, returned from an extensive exploration of the entire western portion of the mine, and reported no more bodies found.

A train of twenty cars loaded with people from Scranton and along the line arrived on the ground at a quarter past twelve o'clock.

At half past one o'clock, the body of Rowland Jones, of Plymouth (Turkey Hill), was brought up the shaft. It was found in a car. His mouth was wide open and his eyes closed. Wife and two children.

Madison Alabough, Avondale, came next. Mouth open; blood coming from the nose. Wife and three children - oldest seven years of age. It was said that this man had told his wife that if an accident ever occurred to the mine, he would be found living, as he knew just where to go for safety. His wife clung to the hope which this promise gave her, to the last, insisting all the time that Madison was all right. Poor woman, how sadly she was mistaken.

Daniel Edwards, of Avondale. Countenance composed. During the war Mr. Edwards was a member of the Seventh Pennsylvania Reserve. Wife and one child.

Mr. John Powell, of Avondale, was the one hundred and eighth man brought from the mine, and was the last one found therein. He was a son-in-law of Mr. Alabough and left a wife and one child.

The foregoing list of names is compiled from a report taken as the bodies were one by one brought from the homes at Avondale, and recognized by relatives or friends. It is probably as accurate as it can be made without much more labor and time than the writer has available. In many names there was great difficulty finding persons who were able to recognize those brought out, and it (is) possible that in (certain situations) one or two may have been given wrong names.

A Committee of the Board of Trustees of the Relief Fund report finding one Edward Bowen (whose name also appears among the list of burials in Hyde Park), his name not in the foregoing list, but the names of Edward Owen and Edward Bowen may have been switched by the committee. The committee found a James Jones, which name does not appear. In this case, James Jones and James Jasion may stand for the same individual. In any event, there should be one hundred and eight bodies recorded as brought from the mine, which is the number given in the proceeding pages."

#### PHMC Avondale Mine Disaster Marker

There is a PHMC marker on Route 11, near its junction with Route 29, Plymouth Township, about the Avondale mine disaster. Here is the text on that marker:

"On Sept. 6, 1869, a fire broke out at the nearby Avondale Colliery, trapping the miners. The eventual death toll was 110. This included five boys between the ages of 12 and 17, and two volunteers who were suffocated while attempting rescue. As a result of the disaster, Pennsylvania's General Assembly enacted legislation in 1870 which was designed to enforce greater safety in the industry."

In the August 31, 2008 issue of the *Citizens' Voice*, William Kashatus wrote the following about the Avondale tragedy:

"The fire quickly roared up the Steuben Shaft (the only exit and entrance to the mine) into the engine room of the coal breaker, setting off a tremendous explosion. It spread so rapidly that the neighboring buildings were immediately engulfed. Telegraph operators put out a call to fire companies in every small town from Plymouth to Scranton. As pumpers and water wagons arrived by train, family and friends of the miners rushed to the scene, horrified by the terrible sight. By mid-afternoon, firefighters were pumping a constant stream of water into a tunnel and down the shaft. At 6 p. m., a small dog and a lighted lamp were sent down in a bucket to test the safety of the burned-out shaft. When the dog arrived alive, a small group of volunteers took its place in the bucket, taking turns descending the shaft. Volunteers Thomas W. Williams and David Jones were overcome by toxic gas and became the first of the many victims whose bodies were recovered. The search continued for the next few days. In the early morning of Wednesday, Sept. 8, searchers descended 300 feet below ground and entered a closed brattice in the east gangway where they fund 67 dead miners grouped together. They had shut themselves in, hoping to escape the deadly inferno. Another 41 dead laborers were found in groups and individually in other areas of the mine, having fled as far as possible from the burning shaft."

#### **HISTORIC DISASTER**

Marker name: Avondale Mine Disaster

County: Luzerne

Date dedicated: Oct. 1, 1994

Marker type: City

**Location:** Route 11 near junction with Route 29, Plymouth Twp. **Category:** Business & Industry, Coal, Government & Politics

19th Century, Labor

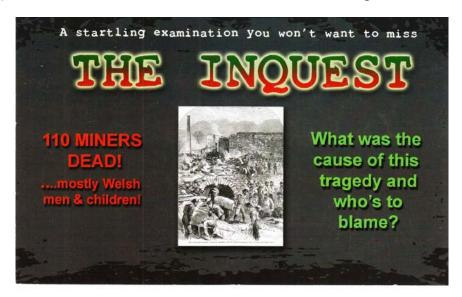
Marker text: "On Sept. 6, 1869, a fire broke out at the nearby Avondale Colliery, trapping the miners. The eventual death toll was 110. This included five boys between the ages of 12 and 17, and two volunteers who were suffocated while attempting rescue. As a result of this disaster, Pennsylvania's General Assembly enacted legislation in 1870 which was designed to enforce greater safety in the industry."

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— FROM AN AUG. 31 CITIZEN'S VOICE COLUMN BY LUZERNE COUNTY

COMMUNITY COLLEGE PROFESSOR WILLIAM KASHATUS

On Saturday February 19, 2011, The Eckley Players presented a theater piece, titled *The Inquest*, about the Avondale tragedy, based on the book by Robert P. Wolensky and Joseph M. Keating titled *Tragedy at Avondale*. Given below is the announcement of that performance:



#### Reverse of the above announcement:

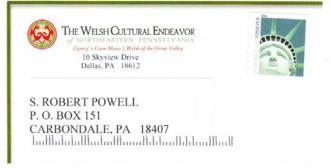


The Avondale Mine Disaster in Plymouth is still considered as the most death-dealing calamity. On September 6, 1869 a fire began and spread to the breaker, which was located directly overhead. There was no escape portal except where the breaker was located then ablaze. A coroner's jury was called and concluded that the disaster was an accident for some odd reason, many of the popular explanations for the fireand associated other sources of derision received no attention in the report...UNTIL NOW... The Eckley Players perform a reenactment based on a book written by Robert P. Wolensky & Joseph M. Keating, entitled: Tragedy at Avondale.

Come join us for an afternoon of fun at: Irem Temple Country Club 1340 Country Club Road Dallas 570-675-1134

Saturday, February 19, 2011 at 3:00PM \$15 includes coffee, tea, and desserts R. S. V. P. to 570-675-1933 1040720151 BCC1 Leave message by February 15th





Here is a list of the Avondale victims whose earthly remains are buried at Washburn Street Cemetery, Scranton:

John Bowen, Edwin Bowen, William Bowen, John Burgh, John Burgh, Jr., Lewis Davies, Thomas Davies, William. J. Davies, Edward Edwards, John D. Evans, William R. Evans (father), William Evans (first son), Lewis Evans (second son), Methuselah Evans (third son), William Evans, William. J. Evans, William. Harding, John Harris, Thomas Hatton (father), Willie Hatton (son), Evan Hughes, John Hughes (same grave as Thomas Hughes), Thomas Hughes (same grave as John Hughes), John Jenkins, Daniel D. Jones (same grave as Thomas D. Jones), Rowland Jones, Thomas D. Jones (same grave as Daniel D. Jones), Thomas L. Jones, William. D. Jones, William Lewis, Rees Llewellyn, Thomas Llewellyn, Rees Lumley, Samuel R. Morgan, William. T. Morgan, Henry Morris, Joseph Morris, Thomas Morris, Richard Owen, James Phillips, Thomas Phillips (father), Willie Phillips (son), William Phorafit, James Powell, William Powell, David Rees (father), David J. Rees (son), Evan Rees, William Rees, William R. Rees, David Thomas, John E. Thomas, John J. Thomas, Morgan Watkins, James T. Williams, William L. Williams, Williams, Richard Woolley.

#### **Additions for Volume XIV:**

1. Harry L. Symons, D&H Engineer and Road Foreman of Engines, Carbondale

On November 14, 2016, Russell Symons presented to us the following information (photo + biographical sketch) about his grandfather, Harry L. Symons:



Harry L. Symons (born May 22, 1877, died April 2, 1950)

#### Harry L. Symons

Harry was born in Pennsylvania on May 22, 1877. He married Margaret Shelley on January 17, 1900 in New York City. He then moved to Carbondale, Pennsylvania and worked on the Delaware and Hudson (D&H) railroad first as an engineer. Within the next ten years, Harry was promoted to Road Foreman of Engines and served in this capacity until his retirement. After retirement, Harry demonstrated his love for the D&H by building wooden models of D&H rolling stock (e.g. box cars, hopper cars, circus cars, etc.), coaches, and locomotive tenders which he gave to friends and family.

Margaret and Harry had three children: Alvesta, Harold, and Russell. Alvesta and Russell also worked for the D&H. Alvesta worked as a secretary and Russell as a fireman and engineer. Harry died on April 2, 1950.

From a newspaper clipping titled "Harry Symmons Mass Tomorrow Morning" that Russell Symons gave to us at the same time, we learn the following about Harry L. Symons:

- --at the time of his death Harry Symons lived at 51 42<sup>nd</sup> Street, Carbondale; his earthly remains are interred in Our Mother of Sorrows Cemetery, Greenfield Township
- --he served as D&H road foreman of engines for 43 years, and was a member of the Brotherhood of Railroad Fireman and Engineers and the D&H Veterans' Association

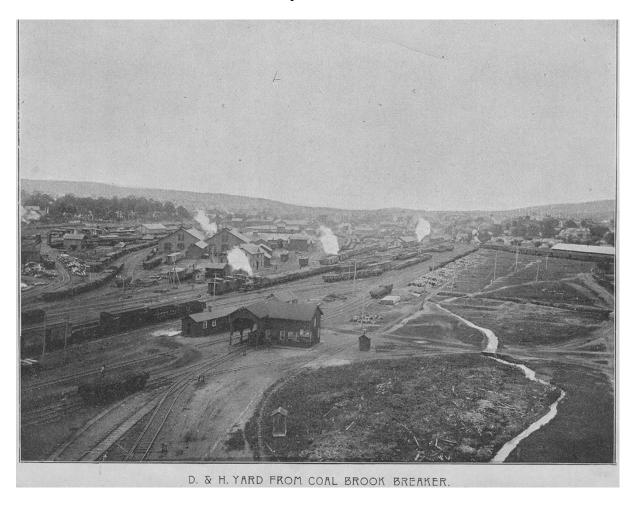
In The Delaware and Hudson Company's "Official List No. 50", dated January 1, 1930, Harry Symons is listed, p. 9, with the other Pennsylvania Division officials:



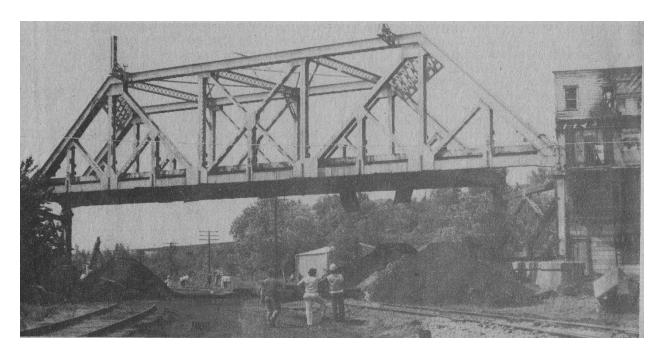
| C. A. Morgan Superintendent Carbondale, Pa. M. F. Clune Assistant Superintendent and Train Master Carbondale, Pa. P. E. Jaynes Assistant Train Master Carbondale, Pa. M. J. Cantwell Assistant Train Master Carbondale, Pa. H. L. Symons Road Foreman of Engines Carbondale, Pa. A. W. Quinney Assistant Road Foreman of Engines Carbondale, Pa. T. M. Murphy Assistant Road Foreman of Engines Carbondale, Pa. B. B. Lyden Chief Train Dispatcher Carbondale, Pa. K. F. Speigel Division Car Distributor Carbondale, Pa. H. E. Morgan Division Agent Carbondale, Pa. F. R. Roberts Relief Agent Carbondale, Pa. J. B. Sampson Division Timekeeper Carbondale, Pa. N. S. Burns Division Examiner Carbondale, Pa. |           |    |                                      |                            |  |  |                               |  |  |  |  |
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| U Telegraph<br>Stations  | Telegraph | -  | Penna.<br>Div.<br>Station<br>Numbers | Distance<br>from<br>Albany | STATIONS   | AGENTS   | CLASSES OF<br>AGENCIES        |  |  |  |  |
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|  | O I       |    | 2 3                                  | 122.24 $127.21$            | Centre VillageN.Y.<br>East WindsorN.Y.           | G. F. Livingston<br>B. F. Edson  | Frt. & Tkt.<br>Frt. & Tkt.    |  |  |  |  |
|  | wi        | D  | 4                                    | 130.64                     | WindsorN.Y.                                      | E. M. Michael  | Frt. & Tkt.                   |  |  |  |  |
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|  |           |    | 154,000 %                            | 159.72                     | BurnwoodPa.                                      |  |                               |  |  |  |  |
| D M  |           |    |                                      | 163.16                     | Herrick CentrePa.                                |  |                               |  |  |  |  |
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|  |           |    | 25                                   |                            | CarbondalePa.                                    | F. H. Baker  | Freight                       |  |  |  |  |
|  |           |    |                                      | 177.26                     | Carbondale (Coal)Pa. Junction, Honesdale Branch  | H. J. Linderman  | Billing Agent                 |  |  |  |  |
| D  | M         | F  | 26                                   | 179.39                     | MayfieldPa.                                      | G. E. Pizer  | Frt. & Tkt.                   |  |  |  |  |
|  | G         |    | 27                                   | 180.69                     | Jermyn Pa.                                       | George S. Dunn   | Frt. & Tkt.                   |  |  |  |  |
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| D  | V ]       | H  | 30                                   | 185.39                     | Jessup-PeckvillePa.                              | R. C. Gerhardt   | Frt. & Tkt.                   |  |  |  |  |
|  |           |    | 31                                   | 186.93                     | OlyphantPa.                                      | C. M. Miller   | Frt. & Tkt.                   |  |  |  |  |
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| -  |           |    | 00                                   | 191.03                     | Providence (Market St.) Pa.                      |  | Jurisdiction                  |  |  |  |  |
|  |           |    | 25                                   | 191.13                     | Junction, Vine St. Branch                        |  | of Scranton                   |  |  |  |  |
|  |           |    |                                      |                            |  |  | (Freight under                |  |  |  |  |
|  |           |    | 35                                   | 192.28                     | Scranton (Wyoming Ave.) Pa. (On Vine St. Branch) | }  | Jurisdiction of Scranton      |  |  |  |  |
|  |           |    | 13 1                                 |                            |  |  | (Carload Frt.,                |  |  |  |  |
| D  | G ]       | R  | 34                                   | 191.15                     | tGreen RidgePa.                                  |  | only under                    |  |  |  |  |
|  |           |    | ~ -                                  |                            |  |  | Jurisdiction                  |  |  |  |  |
|  |           |    | - A                                  | 192.23                     | Junc., Scranton Branch                           | 1  | of Scranton                   |  |  |  |  |
|  |           |    | 35                                   | 192.75                     | Scranton (On Scranton Branch)Pa.                 | J. J. McNulty  | Ticket                        |  |  |  |  |
|  |           |    | 35                                   |                            | Scranton Pa. (On Scranton Branch)                | J. T. Walsh  | Freight                       |  |  |  |  |

H. L. Symons

2. "D. & H. Yard From Coal Brook Breaker," page from a Carbondale souvenir photo booklet, in the collection of the Carbondale D&H Transportation Museum.



3. On page 1 of the June 29, 1983 issue of the *Carbondale News* is an article by Phil Heth titled "City Landmark, Dundaff Street viaduct, finally toppled by wreckers." Here is a photograph of the final section of the viaduct to be taken down. It was toppled by the wreckers on June 23, 1983.



#### **Additions for Volume XV:**

1. Economical Locomotive, 1878

The following description of a new economical locomotive was published (most probably in 1878) in *Scientific American* and reprinted in the September 21, 1878 issue of the *Carbondale Leader* of September 21, 1878, p. 4:

"An Economical Locomotive. / A new anthracite coal burning locomotive has lately been tried on the Old Colony (Mass.) Railway with very promising results. It is said that it is constructed with a largely increased fire surface in order to remove the difficulties arising from the consumption of coal in the ordinary locomotive. Rating the consumption of fuel in the ordinary locomotive at forty to fifty pounds per hour per square foot of grate surface, in this engine when doing its hardest work the consumption is said to be only 16 pounds per hour. The fire box is behind and on a line with, instead of under, the boiler, and while in the common locomotive the dimensions are 60 and 66 by 32 inches, the new design is 8 feet 6 inches long by 7 feet 6 ½ inches wide. The heating surface of the fire box is 103 square feet; of the combustion chamber,

26 feet. The grate rest is between water bars, which prevent them from burning out, and the area is 64 feet, The diameter of the six driving wheels is 54 inches, and above them are placed the boiler and the fire-box. The cab is over the rear end of the boiler, while on top of the fire-box are seats, protected from the sun by an awning. The weight of the engine is 86,150. At the front end of the boiler is a revolving register, which, when open, has an area of six hundred square inches. On account of the free steaming qualities of the engine, it becomes necessary to open this register in order that the steam may pass directly to the stack without passing through the fire. The fuel used by this engine can be delivered in Boston at \$2.25 per ton, or \$1.50 less than the cost of the fuel which is now used. As the fuel remains perfectly quiet in the fire-box, the consumption is slow, and although the engine has no spark arrester, not a spark escapes from the stack; neither is there any annoyance from smoke and gas, which are consumed.—*Scientific American*." (*Carbondale Leader*, September 21, 1878, p. 4)

#### 2. D&H No. 1219 in Carbondale, July 1948

A wonderful photograph of D&H No. 1219 in Carbondale is given in the September 2016 issue of the *Bridge Line Historical Society Bulletin*, p. 5. Here are that photograph and caption:



"D&H 2-8-0 class E6a #1219 with freight near Carbondale, Pa., July 1948 photo from H. K. Vollrath. BLHS Archives, Jack MacDonald collection. Per notes on the photo, the 1219 received an all-welded boiler in 1937. We also note an air horn on this engine; how many E6a's received them?"

#### 3. D&H No. 1214 in Carbondale, 1951

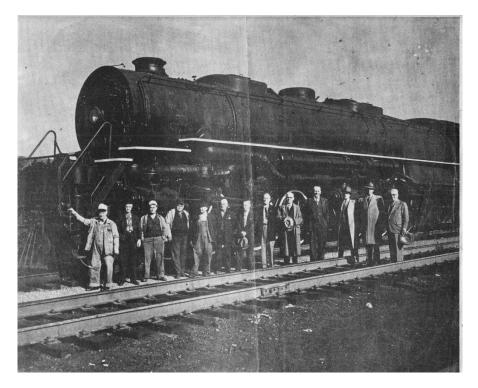
In Volume XV, p. 108, we presented a photograph of D&H No. 1214 in Carbondale. The same photograph is given in the September 2016 issue of the *Bridge Line Historical Society Bulletin* on p. 5. In the caption on the photograph in the *BLHS Bulletin* there are data that we did not know about the engine and the photograph at the time the photo was presented in Volume XV. Here is that *BLHS Bulletin* caption: "D&H 2-8-0 Class E6a #1214 with what could be a 'Miners Special' pulls away from the Carbondale, Pa. station. July 14, 1951 photo by Robert F. Collins. BLHS Archives, Jack MacDonald collection. Another interesting photo; how many E6a's were used in passenger service?"

#### 4. Last Steam Train from Carbondale, 1952

D&H steam and passenger operations into Carbondale came to an end on January 5, 1952, when D&H *No.* 558 pulled into Carbondale.

#### 5. Final Scrapping Operations in Carbondale, 1953

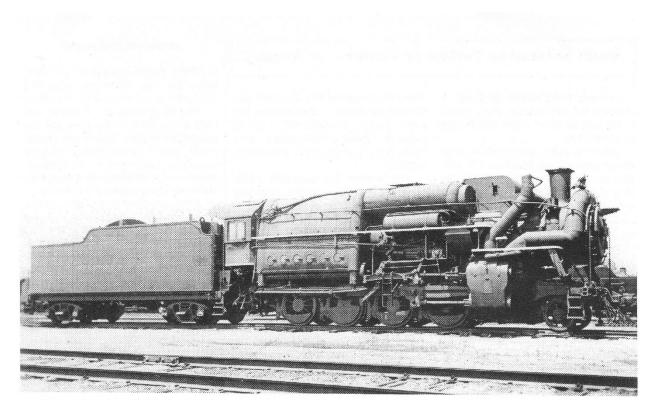
In Volume XV in this D&H series, on page 158, we presented a photograph of D&H Engine No. 1524 that was taken in the Carbondale yard on October 26, 1953. In that photograph, the engine was about to leave Carbondale for Philadelphia, where it would be scrapped. Standing in front of the locomotive are eleven officials. Here is another photograph of D&H No. 1524 that was taken in the same place on the same day. Standing in front of the engine here are thirteen men, mostly rank and file D&H railroad men associated with No. 1524. Here, from the Marianne Stratford Collection in the Carbondale D&H Transportation Museum, is that photograph and its caption:



"THE 13 PALLBEARERS for the last of the Steamers" is the inscription for this photo of 'the old 1524." Standing in front of the huge engine (from left) Gus Wickel, engineer; James Murphy, brakeman; John Shea, brakeman; John Hummiston, fireman; Charles Gauer, conductor; Micky McCann, yard heel man; M. J. Snee, conductor; Jonathan Merrigan, retired engineer; Robert Girram, retired engineer; George Bursanvitch, fireman; M. H. McDonough, superintendent; Thomas Murphy, master mechanic; and Ezra Swartz, chief dispatcher. Photo is dated Oct. 26, 1953."

#### 6. Horatio Allen in Oneonta Yard, 1938

Shown below is a photograph of the "Horatio Allen" that was published in the September 2016 issue of the *Bridge Line Historical Society Bulletin*, p. 29. The photo is given here with the caption from the *BLHS Bulletin*.



"D&H experimental Consolidation #1400, *The Horatio Allen*, sits stored on a yard track in Oneonta, N.Y., in 1938. The 1400 was a D&H experiment to create a *Super Consolidation*, but didn't meet its goals. Photo by Ted Gay, BLHS Archives, Jack MacDonald collection."

7. In the Delaware and Hudson Company's "Official List No. 33" we find very detailed and interesting information about D&H turntables, as of January 1, 1921:

FORM B-384 THE DELAWARE AND HUDSON COMPANY GREENWICH AND JOHNSONVILLE RAILWAY COMPANY THE QUEBEC, MONTREAL AND SOUTHERN RAILWAY COMPANY NAPIERVILLE JUNCTION RAILWAY COMPANY OFFICIAL LIST No. 33 OFFICIALS COMPANY SURGEONS LOCAL WATCH INSPECTORS TRAFFIC AGENCIES DIVISION OFFICIALS **AGENTS** STATIONS STATION NUMBERS MILEAGES TELEGRAPH CALLS RESTAURANTS AND REST HOUSES PASSENGER CONNECTIONS BOAT LINE CONNECTIONS FREIGHT CONNECTIONS **FAST FREIGHT LINES** LOCOMOTIVES AND CAR EQUIPMENT LOCOMOTIVE WATER STATIONS LOCOMOTIVE COALING STATIONS ROUND HOUSES TURNTABLES CLEARANCES STOCK PENS TRACK SCALES ICE HOUSES FREIGHT HANDLING FACILITIES WYES MAP JANUARY I, 1921

In 1921, there was a hand-powered turntable, 60 feet long at Farview (see below). In 1930 (see p. 727), there was no longer a turntable at Farview.

|             | LOCATION                                | POWER BY WHICH OPERATED | (FEET)    |  |  |  |  |  |  |  |  |
|-------------|---|-------------------------|-----------|--|--|--|--|--|--|--|--|
|             | Pennsy                                  | lvania Division.        |           |  |  |  |  |  |  |  |  |
| 930 (see p. | Jefferson Junction                      | Hand                    | 65        |  |  |  |  |  |  |  |  |
| , there was | Honesdale                               | Hand                    | 65        |  |  |  |  |  |  |  |  |
|             | Carbondale (2)                          | One—electric            | 90        |  |  |  |  |  |  |  |  |
| onger a     |   | One—hand                | 65        |  |  |  |  |  |  |  |  |
| table at    | Farview                                 | Hand                    | 60        |  |  |  |  |  |  |  |  |
|             | Green Ridge                             | Electric                | 65        |  |  |  |  |  |  |  |  |
| iew.        | Hudson                                  | Electric                | 65<br>65  |  |  |  |  |  |  |  |  |
|             | *************************************** | Zicotto                 | 00        |  |  |  |  |  |  |  |  |
|             |   |                         |           |  |  |  |  |  |  |  |  |
|             | Susque                                  | hanna Division.         |           |  |  |  |  |  |  |  |  |
|             | Cherry Valley                           | Hand                    | 60        |  |  |  |  |  |  |  |  |
|             | Nineveh                                 | Hand                    | 65        |  |  |  |  |  |  |  |  |
|             | Cooperstown                             | Electric                | 60        |  |  |  |  |  |  |  |  |
|             | Altamont                                | Air                     | 90        |  |  |  |  |  |  |  |  |
|             | Delanson                                | Air<br>Hand             | 65<br>65  |  |  |  |  |  |  |  |  |
|             | Oneonta (3)                             | One—electric            | 75        |  |  |  |  |  |  |  |  |
|             | Oncome (o)                              | Two—hand                | 65-60     |  |  |  |  |  |  |  |  |
|             | Binghamton (2)                          | One—electric            | 90        |  |  |  |  |  |  |  |  |
|             |   | One—hand                | 65        |  |  |  |  |  |  |  |  |
|             | Mohawk                                  | Electric                | 65<br>100 |  |  |  |  |  |  |  |  |
|             |   | Savataga Divisian       |           |  |  |  |  |  |  |  |  |
|             | Saratoga Division.                      |                         |           |  |  |  |  |  |  |  |  |
|             | Colonie                                 | Electric                | 90        |  |  |  |  |  |  |  |  |
|             | North Creek                             | Hand                    | 60        |  |  |  |  |  |  |  |  |
|             | Albany; Church St                       | Hand                    | 65        |  |  |  |  |  |  |  |  |
|             | Whitehall                               | Electric                | 75        |  |  |  |  |  |  |  |  |
|             | Rutland                                 | Hand                    | 60<br>50  |  |  |  |  |  |  |  |  |
|             | Glens Falls                             | Hand                    | 54        |  |  |  |  |  |  |  |  |
|             | Lake George                             | Hand                    | 62        |  |  |  |  |  |  |  |  |
|             | Saratoga                                | Electric                | 60        |  |  |  |  |  |  |  |  |
|             |   |                         |           |  |  |  |  |  |  |  |  |
|             | Cham                                    | plain Division.         |           |  |  |  |  |  |  |  |  |
|             | Rouses Point                            | Air                     | 100       |  |  |  |  |  |  |  |  |
|             | Plattsburg                              | Electric                | 65        |  |  |  |  |  |  |  |  |
|             | AuSable Forks                           | Hand                    | 54        |  |  |  |  |  |  |  |  |
|             | Port Henry                              | Hand                    | 65        |  |  |  |  |  |  |  |  |
|             | Lyon Mountain                           | Hand                    | 54<br>65  |  |  |  |  |  |  |  |  |
|             | Lake Placid                             | Electric                | 100       |  |  |  |  |  |  |  |  |
|             |   |                         |           |  |  |  |  |  |  |  |  |
|             |   |                         |           |  |  |  |  |  |  |  |  |
|             |   |                         |           |  |  |  |  |  |  |  |  |
|             |   | 47                      |           |  |  |  |  |  |  |  |  |

8. The Delaware and Hudson Company's "Official List No. 50" is filled with excellent data about the D&H, as of January 1, 1930:

FORM B-384 THE DELAWARE AND HUDSON COMPANY GREENWICH & JOHNSONVILLE RAILWAY COMPANY NAPIERVILLE JUNCTION RAILWAY COMPANY OFFICIAL LIST No. 50 **OFFICIALS** COMPANY SURGEONS LOCAL WATCH INSPECTORS TRAFFIC AGENCIES DIVISION OFFICIALS AGENTS STATIONS STATION NUMBERS MILEAGES TELEGRAPH CALLS PASSENGER CONNECTIONS BOAT LINE CONNECTIONS FREIGHT CONNECTIONS FAST FREIGHT LINES LOCOMOTIVES AND CAR EQUIPMENT LOCOMOTIVE WATER STATIONS LOCOMOTIVE COALING STATIONS ROUND HOUSES TURNTABLES CLEARANCES STOCK PENS TRACK SCALES ICE HOUSES FREIGHT HANDLING FACILITIES WYES MAP **JANUARY 1, 1930** (SPCo 35469) Printed in U. S. A.

| C. A. Morgan Superintendent Carbondale, Pa. M. F. Clune Assistant Superintendent and Train Master Carbondale, Pa. P. E. Jaynes Assistant Train Master Carbondale, Pa. M. J. Cantwell Assistant Train Master Carbondale, Pa. H. L. Symons Road Foreman of Engines Carbondale, Pa. A. W. Quinney Assistant Road Foreman of Engines Carbondale, Pa. T. M. Murphy Assistant Road Foreman of Engines Carbondale, Pa. B. B. Lyden Carbondale, Pa. K. F. Speigel Division Car Distributor Carbondale, Pa. H. E. Morgan Division Agent Carbondale, Pa. F. R. Roberts Relief Agent Carbondale, Pa. J. B. Sampson Division Timekeeper Carbondale, Pa. N. S. Burns Division Examiner Carbondale, Pa. |            |                                      |                            |   |  |   |  |  |  |  |
|---|------------|--------------------------------------|----------------------------|---|--|---|--|--|--|--|
| U Telegraph<br>Stations   | Telegraph  | Penna.<br>Div.<br>Station<br>Numbers | Distance<br>from<br>Albany | STATIONS  | AGENTS   | CLASSES OF<br>AGENCIES                  |  |  |  |  |
| D   | N V        | 1                                    | 118.81                     | NinevehN.Y.   | See Susqua. Division.  |   |  |  |  |  |
|   | CN         | 2                                    | 122.24                     | Centre VillageN.Y.  | G. F. Livingston   | Frt. & Tkt.                             |  |  |  |  |
|   | O X<br>W D | 3 4                                  | 127.21 $130.64$            | East WindsorN.Y. WindsorN.Y.  | B. F. Edson<br>E. M. Michael   | Frt. & Tkt.<br>Frt. & Tkt.              |  |  |  |  |
|   | " "        |                                      | 136.55                     | Pa. & N. Y. State Line  | 23 337 33703403777777  | *************************************** |  |  |  |  |
| DN  | BO         | 6                                    | 139.31                     | LanesboroPa.  | M. T. Caffrey  | Frt. & Tkt.                             |  |  |  |  |
| DN  | JN         | 7                                    | 140.82                     | Jefferson Junction Pa.  |  |   |  |  |  |  |
|   |            | 9                                    | 141.62<br>142.75           | BrandtPa. Stevens PointPa.  |  |   |  |  |  |  |
| DN  | KA         | 11                                   | 147.92                     | StarruceaPa.  |  |   |  |  |  |  |
| DN  | ON         | 12                                   | 151.69                     | ThompsonPa.   |  |   |  |  |  |  |
| 2745774   |            | 13                                   | 156.45                     | AraratPa.   |  |   |  |  |  |  |
| - 424   |            |                                      | 159.72<br>163.16           | BurnwoodPa.<br>Herrick CentrePa.                                      |  |   |  |  |  |  |
| D N   | UD         | - 24                                 | 164.95                     | Uniondale   |  |   |  |  |  |  |
| DN  | FC         | 17                                   | 170.18                     | Forest CityPa.  |  | (TC: last Tains                         |  |  |  |  |
| D N   | 100 ST     | 25                                   | 176.79.                    | CarbondalePa.   | Contract of the contract of th | Ticket, Joint with Erie R. R.           |  |  |  |  |
|   |            | 25                                   | 177.26                     | Carbondale Pa.<br>Carbondale (Coal) Pa.<br>Junction, Honesdale Branch | H. J. Linderman  | Freight<br>Billing Agent                |  |  |  |  |
|   | MF         | 26                                   | 179.39                     | Mayfield  | G. E. Pizer  | Frt. & Tkt.                             |  |  |  |  |
|   | G B<br>N A | 27                                   | 180.69                     | Jermyn Pa.  |  | Frt. & Tkt.<br>(Frt., Joint In-         |  |  |  |  |
| D   | IN A       |                                      | 181.44                     | Jermyn Transfer Pa.   | W. D. Lloyd  | terch'e with N.Y.O.&W.                  |  |  |  |  |
| D   | A D        | 28                                   | 182.96                     | ArchbaldPa.   | J. F. O'Malley   | Frt. & Tkt.                             |  |  |  |  |
| -   |            | 29                                   | 184.10                     | ‡WintonPa.  | av a sa a s  |   |  |  |  |  |
| D   | VH         | 30                                   | 185.39                     | Jessup-PeckvillePa.   | R. C. Gerhardt   | Frt. & Tkt.                             |  |  |  |  |
| D   | DК         | 31<br>32                             | 186.93<br>188.42           | OlyphantPa. DicksonPa.  | C. M. Miller<br>F. N. Tait   | Frt. & Tkt.<br>Frt. & Tkt.              |  |  |  |  |
| -   | 4.4        | OL.                                  | 100,42                     | a   | A. A. A. A. MANAGE ET L. E.  |   |  |  |  |  |
|   |            | -                                    | >1000000                   |   |  | Carload Frt.,                           |  |  |  |  |
|   |            | 33                                   | 190.35                     | Providence Pa.  |  | Jurisdiction                            |  |  |  |  |
|   |            |                                      | 191.03<br>191.13           | Providence (Market St.) Pa. Junction, Vine St. Branch                 |  | of Scranton                             |  |  |  |  |
|   |            |                                      | 101.10                     | o unceron, y ene se. Branen   |  | (m 1 1 1 )                              |  |  |  |  |
|   |            | 35                                   | 192.28                     | Scranton (Wyoming Ave.) Pa. (On Vine St. Branch)                      | }  | Freight under Jurisdiction of Scranton  |  |  |  |  |
|   | 1 21       | -0 1                                 |                            |   |  | (Carload Frt.,                          |  |  |  |  |
| D   | GR         | 34                                   | 191.15                     | tGreen Ridge Pa.  |  | only under                              |  |  |  |  |
| ~ ·   |            | - 5°                                 |                            |   |  | Jurisdiction                            |  |  |  |  |
|   |            |                                      | 192.23                     | Junc., Scranton Branch  Seranton (On Scranton                         | 1  | of Scranton                             |  |  |  |  |
|   |            | 35                                   | 192.75                     | Branch)Pa.  | J. J. McNulty  | Ticket                                  |  |  |  |  |
|   |            | 35                                   |                            | Scranton  | J. T. Walsh  | Freight                                 |  |  |  |  |

| Stations | Telegraph          | Penna.<br>Div.<br>Station<br>Numbers | Distances<br>from<br>Albany                    | STATIONS   | AGENTS                        | CLASSES OF<br>AGENCIES                                  |
|----------|--------------------|--------------------------------------|--|--|-------------------------------|---|
|          |                    | 38                                   | 194.08   | ‡South Scranton Pa.  |                               | Carload<br>Freight under<br>Jurisdiction<br>of Scranton |
| D        | DΥ                 | 39<br>40<br>41<br>42<br>43           | 195.84<br>198.79<br>200.57<br>202.90<br>204.26 | †Minooka-Taylor. Pa.  **Moosic. Pa.  **Avoca. Pa.  **Pittston. Pa.  †Yatesville. Pa.     | J. E. Loftus<br>J. J. Kennedy | Frt. & Tkt.<br>Frt. & Tkt.<br>Frt. & Tkt.               |
|          |                    | 44 45                                | 205.87<br>207.77<br>207.77                     | Laflin Pa.<br>Hudson Pa.<br>{Junc. of Wilkes-Barre Con-<br>necting R. R. (to Buttonwood) |                               | Frt. & Tkt.   |
|          |                    | 46<br>47                             | 208.34<br>209.15<br>211.05                     | †Miners MillsPa.  ParsonsPa.  Junction of Lehigh Valley  R. R (to Plymouth Br.)          | }                             | Frt. & Tkt.   |
|          |                    | 48                                   | 211.22   | Wilkes-BarrePa.  | E. J. Brenner                 | Freight  Ticket, Joint with L. V. & Penna, R. R.        |
| Stations | relegraph<br>Calls | Penna.<br>Div.<br>Station<br>Numbers | Distance<br>from<br>Hudson                     | Plymouth Bran  | AGENTS                        | CLASSES OF  |
| Stat     | Teleg              | Per<br>DD<br>Sta<br>Num              |  | Junction W. B. C. R. R. and D. and H. tracks Plymouth. Pa.                               |                               | AGENCIES  |
|          |                    | 4                                    | 0.00   | Honesdale Bran   |                               | Freight   |
| Stations | Telegraph          | Penna.<br>Div.<br>Station<br>Numbers | Distance<br>from<br>Carbon-<br>dale            | STATIONS   | AGENTS                        | CLASSES OF<br>AGENCIES                                  |
|          |                    |                                      | 0.47   | Junc., Honesdale Branch<br>177.26 mi. from Albany  |                               | (Carload  |
|          |                    | 24                                   | 11.36  | ‡Farview   |                               | Freight unde<br>Jurisdiction                            |
| D        | W                  | 23                                   | 17.52  | WaymartPa.   | H. S. Coons                   | of Waymart.<br>Freight<br>(Carload Frt.                 |
|          | H                  | 21                                   | 23.40  | ‡PromptonPa.   |                               | only unde<br>jurisdiction<br>of Honesdale               |
|          |                    | 19                                   | 27.15  | HonesdalePa.   | C. J. Dibble                  | Frt., Joint with<br>Erie R. R.                          |
|          | II Tot             | orlino T                             | icket Sta                                      | tions * Pullman Ticket   | Agency. ‡ Non-Age             | non Station   |

## YARD OFFICES AND ADDITIONAL TELEGRAPH OFFICES

## Pennsylvania Division

| 'elegraph<br>Stations | Telegraph<br>Calls | LOCATION  | *                               |
|-----------------------|--------------------|---|---------------------------------|
| DN                    | вр                 | Buttonwood (P. R. R.)   | D.W.Z.                          |
|                       |                    | Plymouth Jc. (Yardmaster's Office).<br>South Wilkes-Barre Yard Office | P. W. Keiner, Yardmaster        |
| DN                    | G                  | Plains Junction Tower   |                                 |
| D                     | WB                 | Wilkes-Barre Yard Office  | T. S. Kelly, Yardmaster         |
| DN                    | MO                 | Mineral Springs Tower   |                                 |
| DN                    | s x                | Parsons Yard  | J. B. Brady, Yardmaster         |
| DN                    | MH                 | Hudson Yard   | C. W. Newton, Yardmaster        |
| DN                    | MJ                 | Minooka Junction Tower  |                                 |
| DN                    | CJ                 | Scranton (Carbon Street) Tower  |                                 |
| D                     | G R                | Green Ridge Yard  | H. N. Atherton, Gen'l Yardmaste |
| DN                    | V                  | Olyphant Yard Office  |                                 |
| DN                    | O U<br>B C         | Lookout June. Tower (Carbondale)                                      |                                 |
| DN                    | ND                 | (Carbondale) Superintendent's Office<br>"Dispatcher's Office          |                                 |
| D                     | DC                 | " Car Distributor   |                                 |
| D                     | J                  | " Yard Office   | E. J. Foley, Gen'l Yardmaster   |
| D                     | Y D                | Ararat Yard   |                                 |
| DN                    | KY                 | State Line Tower (End of Double                                       |                                 |
| DN                    | R A                | Track)<br>Tuscarora Tower (End of Double                              |                                 |
| DI                    | It H               | Track)  |                                 |
| DN                    | X                  | North End Tower (End of Double  |                                 |
| 1200000               | 2000000            | Track)  |                                 |
| DN                    | DV                 | Doraville Tower (End of Double Track)                                 |                                 |

# LOCOMOTIVES, FREIGHT, PASSENGER AND WORK CARS LOCOMOTIVES.

(January 1, 1930)

| NUMBERS                | CLASS             | KIND      | NUMBER OF   | SIZE OF   | DRI    | VERS               | WEIGHT        | TOTAL   | TRACTIV          |
|------------------------|-------------------|-----------|-------------|-----------|--------|--------------------|---------------|---------|------------------|
| NUMBERS                | CLASS             | KIND      | LOCOMOTIVES | CYLINDERS | NUMBER | DIAM. OF<br>WHEELS | ON<br>DRIVERS | WEIGHT  | POWER            |
| 23, 24, 25, 27, 28, 29 | B-4               | Switch    | 6           | 19 x 24"  | 6      | 51"                | 137,850       | 137,850 | 26,500           |
| 30 to 51, inc.         | B-4-A             | "         | 22          | 19 x 24"  | 6      | 51"                | 139,850       | 139,850 | 26,500           |
| 52 to 56, inc.         | B-4-A             | и         | 5           | 19 x 24"  | 6      | 51"                | 134,800       | 134,800 | 26,500           |
| 82                     | B-5               | Switch    | 1           | 22 x 28"  | 8      | 51"                | 190,000       | 190,000 | 46.050           |
| 83                     | B-5 Superheater   | 44        | 1           | 22 x 28"  | 8      | 51"                | 196,750       | 196,750 | 46,050<br>46,050 |
| 81, 84, 85, 86, 87     | B-5               | **        | 5           | 22 x 28"  | 8      | 51"                | 196,750       | 196,750 | 46,050           |
| 91, 93, 94, 95, 96, 98 | B-6               | 66        | 6           | 21½ x 30" | 8      | 57"                | 208,000       | 208,000 | 45,350           |
| 99                     | B-6               | - ((      | 1           | 21 x 30"  | 8      | 57"                | 208,000       | 208,000 | 43,250           |
| 92, 97                 | B-6               |           | 2           | 21½ x 30" | 8      | 57"                | 208,000       | 208,000 | 42,100           |
| 151 to 163, inc.       | B-7 Superheater   | Switch    | 13          | 25½ x 30" | 8      | 57"                | 265,000       | 265,000 | 66,650           |
| 65                     | C-1-I             | Mogul     | 1           | 18 x 24"  | 6      | 57"                | 89,300        | 104,300 | 17,700           |
| 117                    | C-2               | 16        | 1           | 19 x 24"  | 6      | 57"                | 126,500       | 143,500 | 27,700           |
| 118                    | C-2               | **        | Ĩ.          | 19 x 24"  | 6      | 57"                | 126,500       | 143,500 | 26,300           |
| 424                    | G-3               | Passenger | î           | 18 x 24"  | 4      | 69"                | 79.400        | 116,900 | 16,050           |
| 428, 436               | G-4-F             | 11        | 2           | 19 x 24"  | 4      | 69"                | 86,650        | 128,250 | 18,95            |
| 432, 435               | G-4-E             | **        | 2           | 19 x 24"  | â      | 69"                | 90,300        | 129,100 | 18,95            |
| 438-440                | G-5-A             | 44        | 2<br>2<br>2 | 20 x 24"  | 4      | 69"                | 94,000        | 144,050 | 22,800           |
| 443, 448, 450,         | 1                 |           |             |           |        |                    | 2000 0000     |         | - 100            |
| 452 to 456, inc.       | G-5               | **        | - 8         | 20 x 24"  | 4      | 69"                | 96,000        | 150,000 | 22,800           |
| 445, 446, 457          | G-5 Superheater   | 44        | 3           | 201 x 24" | 4      | 69"                | 110,000       | 165,000 | 25,200           |
| 442, 447, 449, 451     | G-5 Superheater   | u         | 4           | 20½ x 24" | 4      | 69"                | 100,600       | 157,700 | 25,200           |
| 507                    | D-3 Superheater   | **        | 1           | 22 x 26"  | 6      | 72"                | 149,650       | 202,300 | 30,150           |
| 504                    | D-3 Superheater   | 11        | 1           | 22 x 26"  | 6      | 72"                | 149,650       | 202,300 | 32,550           |
| 503, 508               | D-3 Superheater   | **        | 2           | 22 x 26"  | 6      | 72"                | 138,600       | 194,300 | 30,150           |
| 521                    | D-3-ASuperheater  | "         | 1           | 21 x 26"  | 6      | 69"                |               |         |                  |
| OMI                    | 15-5-Abuperneater |           | 1           | 21 X 20   | 0      | 09                 | 136,000       | 188,700 | 28,65            |

| ATTIVITY OF THE STATE OF THE ST | 07.100  | KIND                                     | NUMBER OF             | SIZE OF  | DRIVERS               |                                 | WEIGHT  | TOTAL   | TRACTIVE                                       |
|--|---|--|-----------------------|--|-----------------------|---------------------------------|---|---|--|
| NUMBERS  | CLASS   | KIND                                     | LOCOMOTIVES           | CYLINDERS  | NUMBER                | DIAM. OF<br>WHEELS              | ON<br>DRIVERS                                       | WEIGHT  | POWER  |
| 522, 523, 524  | { D-3-A Superheater }   | Passenger                                | 3                     | 22 x 26"   | 6                     | 69′′                            | 160,000   | 208,000   | 35,300   |
| 536, 546, 556<br>534<br>535  | D-3-BSuperheater<br>D-3-B<br>D-3-B                                      | Fast Freight                             | 3<br>1<br>1           | 22 x 26"<br>21 x 26"<br>21 x 26"                         | 6<br>6                | 63"<br>63"<br>63"               | 160,000<br>143,000<br>146,900                       | 208,000<br>189,000<br>193,200                       | 37,200<br>31,450<br>31,450                     |
| 537, 542   | { D-3-B<br>Superheater }  | "  | 2                     | 21 x 26"   | 6                     | 63"                             | 135,100   | 178,600   | 31,450   |
| 538 to 541, inc. 543, 544<br>545, 547, 550 to 555, inc.<br>548   | D-3-B<br>D-3-B<br>D-3-BSuperheater                                      | и<br>и                                   | 6<br>8<br>1           | 21 x 26"<br>21 x 26"<br>21 x 26"                         | 6<br>6<br>6           | 63"<br>63"<br>63"               | 132,100<br>135,900<br>143,000                       | 175,100<br>188,400<br>198,500                       | 31,450<br>31,450<br>31,450                     |
| 549  | { D-3-B<br>Superheater }  | "  | 1                     | 22 x 26"   | 6                     | 63''                            | 143,000   | 198,500   | 34,500   |
| 506, 557, 560, 561<br>502<br>500, 501, 505, 558, 559<br>590, 591, 593, 594<br>592  | D-3 Superheater<br>D-3 Superheater<br>D-3 Superheater<br>D-3-B<br>D-3-B | Passenger " Fast Frt. (Oil) Fast Freight | 4<br>1<br>5<br>4<br>1 | 22 x 26"<br>22 x 26"<br>22 x 26"<br>21 x 26"<br>21 x 26" | 6<br>1<br>6<br>6<br>6 | 72"<br>72"<br>72"<br>63"<br>63" | 160,000<br>160,000<br>160,000<br>146,500<br>149,000 | 204,800<br>204,800<br>204,800<br>193,500<br>197,000 | 34,000<br>31,650<br>30,150<br>31,450<br>31,450 |
| 599  | { D-3-B<br>Superheater }  | u  | 1                     | 23 x 26"   | 6                     | 63''                            | 148,800   | 200,300   | 37,700   |
| 600 to 602, inc.<br>605, 608   | P-Superheater   | Pacific Type                             | 5                     | 24 x 28"   | 6                     | 69"                             | 192,500   | 295,000   | 41,350   |
| 603, 604, 606, 607, 609<br>652<br>712, 714 to 725, inc., 727<br>713, 726   | P-Superheater<br>P-1Superheater<br>E-2<br>E-2 Superheater               | " Consolidation                          | 5<br>1<br>14<br>2     | 24 x 28"<br>22 x 28"<br>21 x 26"<br>21 x 26"             | 6<br>6<br>8<br>8      | 73"<br>73"<br>57"<br>57"        | 192,500<br>185,300<br>135,050<br>137,250            | 295,000<br>283,300<br>155,050<br>158,650            | 42,750<br>41,600<br>31,300<br>31,300           |
| 728 to 730, inc., 734, 736, 737  | E-2   | ш  | 6                     | 21 x 26"   | 8                     | 57"                             | 139,850   | 159,850   | 31,300   |
| 738, 739, 741 to 751, inc.,<br>753, 754, 756 to 761, inc.,<br>763, 764   | E-2-A   | "  | 23                    | 21 x 26"   | 8                     | 57"                             | 139,850   | 159,850   | 31,300   |
| 740, 755<br>781  | E-2-A Superheater<br>E-2-B  | "  | 2                     | 21 x 26"<br>21 x 26"                                     | 8                     | 57"<br>57"                      | 149,250<br>147,050                                  | 171,650<br>168,050                                  | 31,300<br>31,300                               |

|  |                               | 1774          | NUMBER OF   | SIZE OF   | DRI    | VERS               | WEIGHT        | TOTAL   | TRACTIV |
|--|-------------------------------|---------------|-------------|-----------|--------|--------------------|---------------|---------|---------|
| NUMBERS  | CLASS                         | KIND          | LOCOMOTIVES | CYLINDERS | NUMBER | DIAM. OF<br>WHEELS | ON<br>DRIVERS | WEIGHT  | POWER   |
| 765 to 769, inc.; 771 to 773, inc.; 775 to 780, inc.; 782, 783, 784, 785 | E-2-A                         | Consolidation | 18          | 21 x 26"  | 8      | 57"                | 147,050       | 168,050 | 31,300  |
| 786, 885   | E-3-A<br>Superheater          | 46            | 2           | 21 x 30"  | 8      | 57"                | 166,650       | 191,150 | 38,150  |
| 788, 795   | E-3-A                         | "             | 2           | 21 x 30"  | 8      | 57"                | 168,700       | 191,700 | 38,150  |
| 789  | E-3-A<br>Superheater          |               | 1           | 21½ x 30" | 8      | 57"                | 166,650       | 191,150 | 40,150  |
| 797  | E-3-A<br>Superheater          | 44            | 1           | 21½ x 30″ | 8      | 57"                | 175,650       | 201,150 | 40,150  |
| 801, 802   | E-3-A<br>Superheater          | . "           | 2           | 23 x 30"  | 8      | 57"                | 180,650       | 204,050 | 45,750  |
| 800, 900   | E-3-A<br>Superheater          | "             | 2           | 21 x 30"  | 8      | 57"                | 175,650       | 201,150 | 40,150  |
| 803 to 815, inc.; 821, 826,  | E-3-A<br>Superheater<br>E-3-A | u             | 16          | 23 x 30"  | 8      | 57′′               | 184,650       | 209,050 | 48,200  |
| 816 to 820, inc.; 822 to 825,<br>inc.; 827, 828                          | Superheater                   | 45            | 11          | 23 x 30"  | 8      | 57"                | 191,000       | 216,000 | 48,200  |
| 831, 832, 849, 864,<br>873, 884  | E-3-A                         | "             | 6           | 21 x 30"  | 8      | 57"                | 179,700       | 202,200 | 40,150  |
| 846, 854   | E-3-A                         | 11            | 2           | 21 x 30"  | 8      | 57"                | 168,700       | 191,700 | 40,150  |
| 857, 865, 868, 879, 880, 887,<br>895, 898                                | E-3-A<br>Superheater          | ii            | 8           | 21 x 30"  | 8      | 57"                | 183,150       | 207,150 | 40,150  |
| 889, 897   | E-3-A<br>Superheater          | "             | 2           | 21½ x 30″ | 8      | 57"                | 183,150       | 207,150 | 42,100  |
| 894, 901   | E-3-A<br>Superheater          | ***           | 2           | 21 x 30"  | 8      | 57"                | 200,500       | 224,500 | 42,150  |

|  | (2007)               |               | NUMBER OF   | SIZE OF    | DRI    | VERS               | WEIGHT        | TOTAL   | TRACTIVE |
|--|----------------------|---------------|-------------|------------|--------|--------------------|---------------|---------|----------|
| NUMBERS  | CLASS                | KIND          | LOCOMOTIVES | CYLINDERS  | NUMBER | DIAM. OF<br>WHEELS | ON<br>DRIVERS | WEIGHT  | POWER    |
| 905 to 923, inc., 925 to 955, inc.                                     | E-3-A<br>Superheater | Consolidation | 50          | 23 x 30"   | 8      | 57"                | 204,600       | 228,600 | 50,600   |
| 999  | E-3-A<br>Superheater | " (Oil)       | 1           | 23 x 30"   | 8      | 57"                | 188,950       | 214,450 | 48,200   |
| 1007, 1014, 1018, 1021, 1023   | E-5<br>Superheater   | "             | 5           | 25 x 30"   | 8      | 57"                | 226,200       | 256,350 | 56,900   |
| 1026 } { 1008, 1010, 1012, 1013, 1016, }                               | E-5<br>Superheater   | **            | 1           | 24 x 30"   | 8      | 57"                | 231,700       | 261,850 | 55,100   |
| 1028, 1030, 1036, 1039,<br>1041, 1042, 1045, 1048,                     | E-5<br>Superheater   | и             | 16          | 25 x 30"   | 8      | 57"                | 231,700       | 261,900 | 56,900   |
| 1011, 1025, 1029, 1031, 1032,<br>1034, 1035, 1037, 1046,<br>1047, 1053 | E-5<br>Superheater   | u             | 11          | 25 x 30"   | 8      | 57"                | 231,700       | 261,850 | 56,900   |
| 1050   | E-5 Superheater      | и             | 1           | 25 x 30"   | 8      | 57"                | 231,800       | 261,900 | 59,850   |
| 1055 to 1066, inc.   | E-5<br>Superheater   | и             | 12          | 25 x 30"   | 8      | 57"                | 231,600       | 257,100 | 56,900   |
| 1067 to 1081, inc.   | E-5<br>Superheater   | и             | 15          | 25 x 30"   | 8      | 57"                | 233,000       | 258,500 | 56,900   |
| 1082 to 1096, inc.   | E-5<br>Superheater   | u             | 15          | 25 x 30"   | 8      | 57"                | 236,400       | 261,900 | 56,900   |
| . 1111   | E-5-A<br>Superheater | и             | 1           | 25 x 32"   | 8      | 63''               | 270,000       | 296,500 | 68,500   |
| 1112   | E-5-A<br>Superheater | 16            | 1           | 24¼ x 32′′ | 8      | 63''               | 272,000       | 301,500 | 70,950   |
| 1113, 1115 to 1120 inc.  | E-5-A<br>Superheater | ii.           | 7           | 25 x 32"   | 8      | 63''               | 270,000       | 298,000 | 68,500   |
| 1114   | E-5-A<br>Superheater | 44            | 1           | 25 x 32"   | 8      | 63''               | 270,600       | 300,400 | 71,000   |

|   | NUMBERS              | CLASS   |  | NUMBER OF   | SIZE OF  | DRI    | VERS               | WEIGHT        | TOTAL   | TRACTIV |
|---|----------------------|---|--|-------------|--|--------|--------------------|---------------|---------|---------|
| _ | NUMBERS              | CLASS   | KIND   | LOCOMOTIVES | CYLINDERS  | NUMBER | DIAM. OF<br>WHEELS | ON<br>DRIVERS | WEIGHT  | POWER   |
|   | 1200                 | E-6 Superheater   | Consolidation  | 1           | 27 x 32"   | 8      | 63"                | 267,800       | 293,600 | 64,000  |
|   | 1201 to 1220, inc.   | E-6-A<br>Superheater  | "  | 20          | 27 x 32"   | 8      | 63"                | 265,500       | 296,000 | 64,000  |
|   | 1400                 | E-7<br>Superheater  |  | 1           | 23½ x 30″<br>41 x 30″  | 8      | 57"                | 298,500       | 348,000 | 71,600  |
|   | 1401                 | E-7<br>Superheater  | а  | 1           | 22½ x 30"<br>38½ x 30"   | 8      | 57"                | 295,000       | 336,500 | 71,600  |
|   | 1500 to 1501, inc.   | H-1   | $\left\{ egin{array}{l} 	ext{Mallet} \\ 	ext{Articulated} \\ 	ext{Compound} \end{array}  ight\}$ | 2           | 20½ x 32"<br>33 x 32" }  | 12     | 55"                | 330,300       | 350,900 | 78,850  |
|   | 1600 to 1609, inc.   | { H Superheater }   | $\left\{ egin{array}{l} 	ext{Mallet} \\ 	ext{Articulated} \\ 	ext{Compound} \end{array}  ight\}$ | 10          | $\left\{ \begin{array}{l} 26 \ x \ 28'' \\ 41 \ x \ 28'' \end{array} \right\}$                           | 16     | 51"                | 464,100       | 464,100 | 107,700 |
|   | 1610 to 1612, inc.   | $\left\{ \begin{array}{c} H \\ \text{Superheater} \end{array} \right\}$ | $\left\{ egin{array}{l} 	ext{Mallet} \ 	ext{Articulated} \ 	ext{Compound} \end{array}  ight\}$   | 3           | $\left\{\begin{array}{c} 26 \times 28^{\prime\prime} \\ 40 \times 28^{\prime\prime} \end{array}\right\}$ | 16     | 51"                | 465,300       | 465,300 | 102,500 |
|   | Those marked Oil are | Oil Burners.  |  |             |  |        |                    | -             |         |         |
|   |                      |   |  |             |  |        |                    |               |         |         |
|   |                      |   | w  | ORK EQUIPM  | IENT   |        |                    |               |         |         |
| 7 |                      |   |  |             | 9 x 16"  | 2      | 56"                | 32,300        | 75,700  | 4,000   |

|   | KIND   | -   | LOCOMO'  |  |   | KI  | IND  |  |  | NUMBER OF<br>LOCOMOTIVES    |  |  |
|---|--|---|--|--|---|---|--|--|--|-----------------------------|--|--|
| Eight Wheel Sw<br>Mogul<br>Fen Wheel<br>American  | her.<br>itcher.  |   | 31<br>31<br>347<br>21  |  | Pacific   | ulated<br>n<br>ment   |  |  |  | 133<br>11<br>15<br>284<br>2 |  |  |
|   |  |   |  | MOTIVE<br>January 1,   | BOOSTER   |   |  |  |  |                             |  |  |
|   |  |   |  |  | TR  | ACTIVE POW  | ER   |  |  |                             |  |  |
| NO.   | TYPE   |   |  | 0  | AT ST   | EAM PRESSU  | RE OF  |  |  |                             |  |  |
|   |  | 180 LBS.  | 190 LBS.   | 200 LBS.   | 210 гвз.  | 220 LBS.  | 230 гвз.   | 240 гвз.   | 250 LBS.   | 400 LB                      |  |  |
| 1<br>101<br>102<br>103<br>104<br>105<br>111<br>112<br>113<br>114<br>115<br>116<br>117<br>118<br>119<br>120<br>127<br>128<br>129<br>130<br>131 | A<br>B<br>B-1<br>B-1<br>B-1<br>B-1<br>B-1<br>B-1<br>B-1<br>B-1<br>B-1<br>B | 10,400 12,950 | 11,000<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700<br>13,700 | 11,600<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400<br>14,400 | 12,200 15,100 | 12,750 15,850 | 13,300<br>16,550<br>16,550<br>16,550<br>16,550<br>16,550<br>16,550<br>16,550<br>16,550<br>16,550<br>16,550<br>16,550<br>16,550<br>16,550<br>16,550<br>16,550<br>16,550<br>16,550<br>16,550<br>16,550<br>16,550<br>16,550 | 13,900<br>17,300<br>17,300<br>17,300<br>17,300<br>17,300<br>17,300<br>17,300<br>17,300<br>17,300<br>17,300<br>17,300<br>17,300<br>17,300<br>17,300<br>17,300<br>17,300<br>17,300<br>17,300<br>17,300<br>17,300<br>17,300<br>17,300<br>17,300 | 14,500<br>18,000<br>18,000<br>18,000<br>18,000<br>18,000<br>18,000<br>18,000<br>18,000<br>18,000<br>18,000<br>18,000<br>18,000<br>18,000<br>18,000<br>18,000<br>18,000<br>18,000<br>18,000<br>18,000<br>18,000<br>18,000<br>18,000<br>18,000<br>18,000 |                             |  |  |

# FREIGHT TRAIN CARS (December 1, 1929)

|               |  | No. of | 50,000             | 60,000                 | 80,000 | 85,000             | 100,000            | INSIDE     |     |     |     |            |            |
|---------------|--|--------|--------------------|------------------------|--------|--------------------|--------------------|------------|-----|-----|-----|------------|------------|
| SERIES        | CLASS  | Cars   | Pounds<br>Capacity | Pounds Capacity Capaci |        | Pounds<br>Capacity | Pounds<br>Capacity | Ler<br>Ft. | In. | Ft. | In. | Hei<br>Ft. | ight<br>In |
| 100-601       | (Sing. Hopper Bottom Gondolas (Steel Center Sills)   | 372    |                    | 372                    |        |                    |                    | 32         | 0   | 8   | 6   | 4          | (          |
| 1001-1301     | Composite Hopper Bottom Gondolas                     | 301    |                    |                        |        | 301                |                    | 32         | 58  | 8   | 11  |            |            |
| 269-4318      | Steel Twin Hopper Bottom Gondolas                    | 48     |                    |                        |        |                    | 48                 | 31         | 6   | 9   | 6   | 6          |            |
| 319           | Composite Twin Hopper Gondolas                       | - 1    |                    |                        |        | 1                  |                    | 32         | 0   | 8   | 11  | 5          |            |
| 1412–4563     | Composite Twin Hopper Bottom Gondolas.               | 110    |                    |                        |        | 110                |                    | 32         | 0   | 8   | 11  | 5          |            |
| 1564-6563     | Composite Twin Hopper Bottom Gon-<br>dolas           | 1855   |                    |                        |        | 1855               |                    | 32         | 0   | 8   | 11  | 5          |            |
| 8000-8499 "B" | Gondolas (Steel Underframe)                          | 320    |                    |                        |        | 320                |                    | 32         | 0   | 8   | 83  |            |            |
| 8000-8499     | Platform (Steel Underframe)                          | 151    |                    |                        |        | 151                |                    | 32         | 0   | 9   | 2   | 0          |            |
| 10000-10499   | Single Hopper Bottom Gondolas (Steel   Center Sills) | 330    |                    | 330                    |        |                    |                    | 32         | 0   | 8   | 6   | 4          |            |

<sup>&</sup>quot;B" 37 cars in this series have coal sides 3' 4" high inside, 137 cars have coal sides and drop end 3' 0" high inside, and 2 have coal sides 5' 6" high, 7 have coal sides 4' 10", 53 have coal sides 4' 0" and 75 have coal sides 4' 2" high.

9 cars have coal sides and drop end 3' 4" high.

#### FREIGHT TRAIN CARS-Continued

|   |   |  | 50,000     | 60,000  | 80,000             | 85,000             | 100,000            |   | INSII                                   | ÞΕ  |   |
|---|---|--|------------|---|--------------------|--------------------|--------------------|---|---|---|---|
| SERIES  | CLASS   | No. of<br>Cars   | Pounds   F | Pounds<br>Capacity  | Pounds<br>Capacity | Pounds<br>Capacity | Pounds<br>Capacity | Length<br>Ft. In.   | Ft.                                     |   | Heigh<br>t. I   |
| 5750-16199<br>6250-16324<br>6325-16349<br>6375-16594 "D"<br>6750-16849<br>6850-16800 "E"<br>8000-1899<br>9000-19499<br>9000-20899<br>9000-20899<br>1000-22399<br>2400-22499<br>2501-23820<br>4300-24899 | S. D. Stock (Steel Underframe). D. D. Stock " " Refrigerator (Steel Underframe). Produce " " Produce (Steel Underframe). Box  Box (Steel Underframe). Automobile (Steel Underframe). Box (Steel Underframe). Automobile Box (Steel Underframe). | 71<br>222<br>19<br>56<br>41<br>9<br>6<br>703<br>73<br>682<br>93<br>1304<br>539 |            | 4<br>71<br>22<br>19<br>56<br>41<br>9<br>6<br>703<br>73<br>682<br>93 |                    |                    |                    | 35 4<br>35 11<br>35 11<br>35 8 <sup>3</sup><br>36 0<br>36 0<br>35 5<br>35 5<br>36 0<br>36 0<br>36 0<br>36 0<br>36 0<br>36 0<br>36 0<br>36 0 | 888888888888888888888888888888888888888 | 0<br>6<br>6<br>2 <sup>1</sup> / <sub>4</sub><br>6<br>6<br>0 <sup>1</sup> / <sub>2</sub><br>0 <sup>2</sup> / <sub>2</sub><br>6<br>6<br>6<br>6<br>6<br>6<br>6<br>6<br>6<br>6<br>6<br>6<br>6<br>6<br>6<br>6<br>6<br>6<br>6 | 7<br>7 1<br>7 1<br>8<br>8<br>8<br>8<br>7<br>7<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>7<br>7<br>7<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8 |

<sup>&</sup>quot;D" 9 cars used in passenger train service. Nos. 16576, 16578, 16580, 16583, 16584, 16587, 16590, 16593, 16594. "E" Assigned to milk train service.

#### FREIGHT TRAIN CARS-Continued

|                            | 200  | No. of | 50,000             | 60,000             | 80,000             | 85,000             | 100,000            | 110,000            | 220,000            | INSIDE     |            |            |                          |            |     |
|----------------------------|--|--------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------------|------------|------------|--------------------------|------------|-----|
| SERIES                     | CLASS  | Care   | Pounds<br>Capacity | Ler<br>Ft. | gth<br>In. | Wie<br>Ft. | dth<br>In.               | Hei<br>Ft. | ght |
| 24900-24999                | Box (Steel Center Sills)                         | 89     |                    | 89                 |                    |                    |                    |                    |                    | 35         | 5          | 8          | 01/2                     | 7          | 0   |
| 25000-25999                | Composite Twin Hopper Bot-                       | 924    |                    |                    |                    | 924                |                    |                    |                    | 32         | 0          | 8          | 11                       | 5          | 8   |
| 26000-27499                | Composite Twin Hopper Bot-                       | 1386   |                    |                    |                    | 1386               |                    |                    |                    | 32         | 0          | 8          | 11                       | 5          | 8   |
| 27500-28999                | Composite Twin Hopper Bot-                       | 1389   |                    |                    |                    | 1389               |                    |                    |                    | 32         | 0          | 8          | 11                       | 5          | 8   |
| 35501-35990                | Cabooses   | 199    | 30                 | 169                |                    |                    |                    |                    |                    |            |            |            |                          |            |     |
| 37000–37999 "A"            | Gondola (Drop Bottom Steel) Underframe)          | 987    |                    |                    |                    | 987                |                    |                    |                    | 32         | 11         | 8          | 8                        | 3          | 8   |
| 10000-42201                | Twin Hopper Bottom Gondolas (Steel Center Sills) | 2144   |                    |                    |                    | 2144               |                    |                    |                    | 36         | 0          | 8          | $6\frac{1}{2}$           | 4          | 3   |
| 44000-44999<br>50000-50001 | Steel, Twin Hopper                               | 997    |                    |                    |                    |                    |                    | 997                | 2                  | 30<br>31   | 6          | 9          | $\frac{5\frac{1}{2}}{5}$ | ;.         |     |
| 51000-51499                |  | 499    |                    |                    |                    |                    | 499                |                    |                    | 40         | 6          | 8          | 6                        | 9          | 0   |
|                            | Totals   | 15726  | 30                 | 3278               | 1304               | 9568               | 547                | 997                | 2                  |            |            | 100        | 7. 14                    |            |     |

<sup>&</sup>quot;A" 939 Cars have had sides raised to 4' 63%".

# RECAPITULATION OF FREIGHT TRAIN CARS (December 1, 1929)

| Automobile Box Cabooses. Produce Refrigerator Platform |       | BROUGHT FORWARD |
|--|-------|-----------------|
| Carried Forward  | 4,467 | Total           |

## PASSENGER TRAIN CARS (December 1, 1929)

| NUMBERS     | NO.<br>OF<br>CARS | KIND                | LENGTH<br>OVER-<br>ALL | WEIGHT  | Seating | HEAT  | LIGHT    | PLATFORM                                |
|-------------|-------------------|---------------------|------------------------|---------|---------|-------|----------|---|
| 11 to 22    | 9                 | Coach               | 74'43"                 | 102,300 | 82      | Steam | Electric | Open                                    |
| 98          | 1                 | 11                  | 54'10"                 | 48,700  | 60      | Steam | Oil      | open "                                  |
| 06          | 1                 | "                   | 56'                    | 52,300  | 60      | "     | 11       | 66                                      |
| 14          | î                 | **                  | 59'                    | 53,600  | 64      | 66    | 44       | **                                      |
| 32          | î                 | "                   | 61'10"                 | 53,400  | 68      | **    | Gas      | 66                                      |
| 41          | 1                 | "                   | 63'                    | 52,800  | 66      | 44    | Oil      | **                                      |
| 47          | î                 | "                   | 58'6"                  | 53,600  |         | "     | "        |   |
| 152 to 154, | 1                 |                     | 00 0                   | 00,000  | 04      |       | 800      | 2                                       |
| 156 & 158.  |                   | u                   | 61'2"                  | 53,200  | 66      | Stonm | - "      | **                                      |
|             | 5                 | "                   | 61'3"                  | 56,000  | 66      | Steam | Con      | **                                      |
| 160         |                   |                     | 61'3"                  | 52,300  | 62      | "     | Gas      | "                                       |
| 161         | 1                 | "                   |                        |         |         | "     | 1000     | 44                                      |
| 165         | 1                 | **                  | 61'3"                  | 52,300  | 62      | **    | Oil      | "                                       |
| 166         | 1                 | "                   | 61'3"                  | 52,300  | 62      | "     |          | "                                       |
| 167         | 1                 | "                   | 58'4"                  | 51,000  | 64      |       | 100      | 100                                     |
| 169         | 1                 | "                   | 60'11"                 | 56,200  | 64      | **    | Gas      | **                                      |
| 170         | 1                 |                     | 60'11"                 | 59,100  | 62      |       | Oil      | **                                      |
| 172         | 1                 | "                   | 60'11"                 | 58,300  | 62      | **    | "        | "                                       |
| 174         | 1                 |                     | 60'11"                 | 56,400  | 64      | "     | Gas      | 61                                      |
| 176         | 1                 | **                  | 60'11"                 | 55,200  | 64      | 44    | "        | "                                       |
| 177         | 1                 | -11                 | 60'11"                 | 56,400  | 64      | **    | 11       | "                                       |
| 178         | 1                 | 44                  | 60'11"                 | 57,400  | 62      | **    | Oil      | 46                                      |
| 180         | 1                 | "                   | 60'11"                 | 57,000  | 62      | **    | "        | 61                                      |
| 183         | 1                 | **                  | 62'7"                  | 54,700  | 66      | None  | "        | **                                      |
| 184         | 1                 | "                   | 62'7"                  | 55,100  | 62      | Stove | "        | **                                      |
| 185         | 1                 | **                  | 62'7"                  | 55,800  | 66      | Steam | Gas      | 26                                      |
| 192         | Î                 | 44                  | 62'7"                  | 55,000  | 66      | 44    | "        | Open                                    |
| 195         | î                 | **                  | 62'7"                  | 54,800  | 68      | **    | 66       | Open                                    |
| 201         | 2                 | ***                 | 62'7"                  | 57,300  | 66      | **    | Gas      | Open                                    |
| 204         | 1                 | **                  | 62'7"                  | 58,200  | 64      | ee.   | Oil      | 44                                      |
| 205         | î                 | **                  | 60'103"                | 57,500  |         | 11    | "        | "                                       |
| 209 to 212  |                   |                     | 00 104                 | 01,000  | 02      |       |          |   |
| 214 to 216. |                   | - 11                | 69'5"                  | 78,300  | 73      | "     | Electric | Vestibul                                |
|             |                   |                     | 68'5"                  | 76,200  | 73      | "     | Electric | 100000000000000000000000000000000000000 |
| 217         |                   | **                  | 68'5"                  | 70,000  | 73      | **    | "        | Open                                    |
| 218–219     |                   | "                   |                        |         | 64      | **    | Oil      |   |
| 220         | 1                 | **                  | 58'52"                 | 53,800  |         | "     |          | "                                       |
| 221 to 225  |                   | "                   | 68'5"                  | 70,000  | 73      | **    | Electric | "                                       |
| 226-227     |                   | "                   | 68'5"                  | 70,700  | 74      | "     | Gas      | 100                                     |
| 228         | 1                 | "                   | 68'5"                  | 71,800  | 73      | "     | Electric | "                                       |
| 230 to 234  | 5                 | "                   | 68'5"                  | 71,800  | 74      |       | Gas      | "                                       |
| 239         | 1                 | 37274               | 62'7''                 | 54,800  | 66      | **    | Oil      | **                                      |
| 240         | 1                 | "                   | 61'3"                  | 53,000  | 66      | "     | Gas      | **                                      |
| 242         | 1                 | Coach 6 Wheel Truck | 78'81"                 | 113,000 | 82      | "     | Electric | Vestibule                               |

| NUMBERS                    | NO.<br>OF<br>CARS | KIND   | LENGTH<br>OVER-<br>ALL | WEIGHT           | Seating | HEAT  | LIGHT    | PLATFORM  |
|----------------------------|-------------------|--|------------------------|------------------|---------|-------|----------|-----------|
| 243 to 245                 | 3                 | $\left\{\begin{array}{c} Coach \\ 6 \ Wheel \ Truck \end{array}\right\}$ | 78'93"                 | 128,000          | 82      | Steam | Electric | Vestibule |
| 246 to 252                 | 7                 | ***  | 78'81"                 | 113,000          | 82      | 46    | · · ·    | **        |
| 254 to 259                 | 6                 | ( Coach & )  | 78'81"                 | 113,000          | 82      | "     | "        |           |
| 260, 261                   | 2                 | Smoker<br>6 Wheel Truck  | 78'81"                 | 113,000          | 82      | Steam | Electric | Vestibule |
| 262                        | 1                 | Coach  | 61'4"                  | 55,200           | 66      | 11    | Oil      | Open      |
| 263                        | 1                 | . 11   | 61'3"                  | 52,900           | 66      | "     | Gas      | u         |
| 270                        | 1                 |  | 59'21"                 | 51,000           | 64      | Steam | Gas      | 44        |
| 272                        | 1                 | **   | 59'21"                 | 54,400           | 64      | "     | **       | - 11      |
| 274                        | 1                 | - 11   | 60'71"                 | 52,300           | 65      | "     | Oil      | - 44      |
| 275                        | 1                 | "  | 55'75"                 | 52,000           | 62      | "     | Gas      | "         |
| 276                        | 1                 |  | 55'7"                  | 52,700           | 62      | **    | **       | **        |
| 277                        | 1                 | - "  | 55'11"                 | 48,400           | 60      |       | Oil      |           |
| 278                        | 1                 | - 44   | 58'1"                  | 53,900           | 64      | "     | 44       | 44        |
| 280                        | 1                 | 11   | 64'91"                 | 65,400           | 71      | Steam | 11       | 44        |
| 281                        | 1                 | и  | 64'9½"                 | 67,300           | 71      | 11    | **       | 44        |
| 282 to 285,<br>287 to 289) | 7                 | "  | 64'91''                | to<br>65,260     | 71      | ii.   | "        | **        |
| 290 to 295                 | 6                 | "  | 58'5"                  | 54,400<br>53,100 | 63      |       | "        | 44        |
| 297 to 299                 | 3                 | "  | 57'11"                 | to<br>56,400     | 64      | 11    | "        | "         |
| 301                        | 1                 | "  | 58'7"                  | 54,000           | 64      | 11    | 11       | **        |
| 302                        |                   | "  | 57'11"                 | 52,260           | 64      | "     | "        | 44        |
| 304                        | 1                 | 11   | 51'10"                 | 47,600           | 56      | 11    | - 66     | 11        |
| 306                        | 1                 | 66   | 57'11"                 | 53,700           | 64      | **    | 11       | 44        |
| 307                        |                   | "  | 58'7"                  | 53,000           | 64      | - 11  | 11       | ii        |
| 308, 310                   | 2                 | 11   | 57'11"                 | 53,000           | 64      | "     | "        | u         |
| 311                        | 1                 |  | 57'11"                 | 52,640           | 62      | 44    |          | "         |
| 313                        | 1                 | "  | 58'7"                  | 54,100           | 64      | **    | "        | ee        |
| 316 to 319                 | 4                 | Smoker   | 64'9"                  | 95,800           | 68      | Steam | Electric | Vestibule |
| 320 & 322                  | 2                 | "  | 70'43''                | 105,100          | 75      | "     | "        | "         |
| 323                        | 1                 | "  | 69'5"                  | 105,300          | 76      | **    | 44       | **        |
| 325 to 328                 | 4                 | Coach & Smoker   |                        | 82,000           | 72      | "     | 11       | Open      |
| 329 to 331                 | 3                 | Coach  | 68'5"                  | 82,000           | 74      | 44    | 44       | ii        |
| 332 to 343                 | 12                | "  | 69'51"                 | 88,600           | 74      | **    | - 46     | Vestibule |
| 344                        | 1                 | "  | 70'43''                | 105,500          | 73      | "     | "        | "         |
| 346 to 351                 | 6                 | Coach 6 Wheel Truck  | 78'5"                  | 113,700          | 82      | ш     | **       | Vestibule |

# PASSENGER TRAIN CARS-Continued

| NUMBERS    | NO.<br>OF<br>CARS | KIND                                       | LENGTH<br>OVER<br>ALL | LENGTH<br>BAG'E<br>COMP'T | WEIGHT  | Seating | PLATFORM              | HEAT AND         |
|------------|-------------------|--|-----------------------|---------------------------|---------|---------|-----------------------|------------------|
| 352 to 360 | 9                 | Coach & Smoker (6WheelTruck) Steel Coach & | 81'8½"                |                           | 146,000 | 86      | Vestibule             | Steam & Elec     |
| 361 to 369 | 9                 | Smoker<br>(6WheelTruck)<br>Steel           | 81'8"                 |                           | 139,900 | 90      | "                     | и                |
| *501       | 1                 | Pass'r & Bag'e                             | 61'7"                 | 32'11"                    | 56,700  | 22      | Open                  | Steam & Oil      |
| 1504       | î                 | " Case I de Dag e                          | 61'9"                 | 12'                       | 56,700  | 50      | Open                  | Steam & Elec.    |
| ‡505       | 1                 | "  | 62'3"                 | 11'11"                    | 56,000  | 52      | **                    | Steam & Elec     |
| *507       | 1                 | 11   | 61'10"                | 32'101"                   | 56,700  | 24      | **                    | Steam & Oil      |
| *508       | 1                 | ti.  | 62'1"                 | 33'7"                     | 53,400  | 24      | **                    | Steam & On       |
| 509        | 1                 | **   | 61'53"                | 26'                       | 50,900  | 30      | 66                    |                  |
| *510       | 1                 | "  | 61'101"               | 32'11"                    | 54,000  | 24      | "                     | er-              |
| *‡513      | 1                 | **   | 62'                   | 32'11"                    | 55,450  | 24      | "                     | Steam & Elec.    |
| 514        | 1                 | 11   | 60'101"               | 15'                       | 56,500  | 48      | **                    | Steam & Oil      |
| 516        | 1                 | . 11                                       | 60'101"               | 15'                       | 57,400  | 48      | "                     | is on            |
| *517       | 1                 | и  | 61'10"                | 35'83''                   | 56,700  | 20      | "                     | Steam & Oil      |
| ‡*521      | 1                 | и  | 61'6''                | 32'11"                    | 56,700  | 22      | **                    | Steam&Elec.      |
| 525        | 1                 | и  | 53'4"                 | 21'1"                     | 55,600  | 28      | **                    | Steam & Oil      |
| 526        | 1                 |  | 71'8\"                | 26'31"                    | 59,000  | 40      | "                     | Stove & Oil      |
| 528        | 1                 | tt.  | 62'                   | 23'11'2"                  | 53,700  | 36      | **                    | Steam & Oil      |
| 529        | 1                 | 44   | 58'5"                 | 26'31"                    | 53,300  | 26      | ee                    | Stove & Oil      |
| 530        | 1                 | a  | 58'93"                | 23'61"                    | 53,300  | 32      | u                     | Baker Htr.       |
| 534        | 1                 | **   | 57'5"                 | 17'6"                     | 48,700  | 40      | "                     | Steam & Oil      |
| 537        | î                 | "  | 64'10"                | 18'3"                     | 61,500  | 45      | (4 37                 | "                |
| 541 to 543 | 3                 | TI.  | 66'41''               | 26'23"                    | 81,200  | 42      | 1 Vestib'e<br>Blind   | Steam & Electric |
| 544        | 1                 | "  | 74'6''                | 36'11"                    | 101,900 | 36      | {1 Open<br>1 Blind    | } "              |
| 545-546    | 2                 | "  | 76'5"                 | 35'21"                    | 116,700 | 40      | 1 Vestib'e<br>1 Blind | } "              |
| 601        | 1                 | { Parlor Cafe } 6 Wheel Truck}             | 79'31''               |                           | 153,600 | 26      | Vestibule             | Steam & Elec.    |
| 602        | 1                 | { Parlor Cafe } 6 Wheel Truck}             | 78'81"                |                           | 125,400 | 42.     | и                     | **               |
| 603        | 1                 | Parlor Cafe 6 Wheel Truck                  | 78'81"                |                           | 125,000 | 42      | 11                    | 44               |
| 605        | 1                 | Dining 6 Wheel Truck                       | 79'53''               |                           | 140,200 | 40      | и                     | "                |
| 606        |                   | Dining 6 Wheel Truck                       | 81'43''               |                           | 149,100 | 40      | и                     | Steam & Elec.    |
| 607        | 1                 | Dining 6 Wheel Truck                       | 78'101"               |                           | 145,700 | 40      |                       | Steam & Electric |
| 608        | 1                 | Dining 4 Wheel Truck                       | 69'51''               |                           | 100,600 | 30      | "                     | Steam & Elec.    |

<sup>\*</sup> Four doors in baggage compartment 1504, 505, 513 and 521 equipped with Electric Train Line.

| NUMBERS                 | OF<br>CARS | KIND                         |              | OVI<br>AL       | CR       | INSID          |            | WEI            | GHT | SIDE | PLATFORM | HEAT AND<br>LIGHT            |
|-------------------------|------------|------------------------------|--------------|-----------------|----------|----------------|------------|----------------|-----|------|----------|------------------------------|
| 402 "D"                 | 1          | Baggage                      |              | 57′10           | ye.      | 50'2"          | 1          | 55.            | 000 | 4    | Open     | Steam & Oil                  |
| 403 "D"                 | 1          | - 11                         |              | 52'1'           | ,        | 44'7"          |            | 52,            |     | 4    | Open     | Stove & Oil                  |
| 404-405                 | 2          | . 44                         |              | 57'0'           | 0        | 49'6"          |            | 52,            |     | 4    | Open     | Steam & Oil                  |
| 406                     | 1          | **                           |              | 53'2"           |          | 49'6"          |            | 52,            | 700 | 4    | Blind    | Steam & Elec                 |
| 407                     | 1          | 11                           |              | 53'2"           |          | 49'6"          |            | 57,            |     | 4    | Blind    | Steam & Elec                 |
| 408-409                 | 2          | 11                           |              | 57'10           | pre .    | 49'3"          |            | 52,            |     | 4    | Open     | Steam & Elec                 |
| 410                     | 1          | "                            |              | 57'             | 33       | 49'6"          |            | 53,0           |     | 4    | Open     | Steam & Oil                  |
| 411 to 416.             | 6          | 11                           |              | 53'71           |          | 49'6"          |            | 81,            |     | 4    | Blind    | "                            |
| 417                     | 1          | - 11                         |              | 59'3"<br>60'4"  |          | 55'3"          |            | 59,            |     | 4    | "        | Steam & Oil                  |
| 418<br>419              | 1          | 66                           |              | 63'2"           |          | 57'<br>59'     |            | 57,6<br>63,4   |     | 4 4  | ü        | "                            |
| 420-421                 | 2          | 66                           |              | 57'0'           |          | 49'6"          |            | 52,            |     | 4    | ш        | "                            |
| 422-423                 | 2          | **                           |              | 52'4'           |          | 49'6"          |            | 52,            |     | 4    | Blind    | **                           |
| 425                     | ĩ          | 66                           |              | 57'1"           |          | 49'8"          |            | 53,            |     | 4    | Open     | "                            |
| 426                     | 1          |                              |              | 52'4"           |          | 48'11"         | ,          | 52,            |     | 4    | Blind    | 11                           |
| 437                     | 1          | 64                           |              | 53'2'           |          | 49'6"          |            | 56.            |     | 4    | Blind    | Steam & Oil                  |
| 444                     | 1          |                              |              | 63'10           |          | 55'3"          |            | 53,            |     | 4    | Open     | (1                           |
| 450                     | 1          | **                           |              | 64'51           |          | 60'            |            | 95,            |     | 4    | Blind    | Steam & Elec                 |
| 451-452                 | 2          | u                            |              | 63'3'           | ,        | 60'            | 3          | 68,            | 300 | 4    | Blind    | Steam & Elec                 |
| 450                     | 1          | "                            |              | 63'7'           | ,        | 60'            |            | 2000           |     |      | "        |                              |
| 453<br>454 <b>-</b> 455 | 2          | **                           |              | 65'             |          | 60'            |            | 92,            |     | 4 4  | "        | Steam & Elec                 |
| 456 to 461.             | 6          | 11                           |              | 63'1"           | ,        | 60'            |            | 71,            |     | 4    | - 44     | Steam & Elec<br>Steam & Elec |
| 462                     | ĭ          | 66                           |              | 64'5            |          | 60'            |            | 102,           |     | 4    | 11       | Steam & Elec                 |
| 463                     | 1          | 11                           |              | 64'5            |          | 60'            |            | 99,            |     | 4    | "        | "                            |
| 464                     | 1          | 44                           |              | 63'1'           | *        | 60'            |            | 73,            |     | 4    | 11       | - 11                         |
| 465-466                 | 2          | 11                           |              | 64'5            | "        | 60'            |            | 101,           |     |      | 11       | ***                          |
| 467-469                 | 3          |                              |              | 64'5            |          | 60'            |            | 98,            |     | 4    | ii .     | Steam & Elec                 |
| 470                     | 1          | "                            |              | 63'1'           |          | 60'            |            | 71,            | 500 | 4    | "        | Steam & Elec                 |
| 471 to 475.             | 5          | "                            |              | 64'2'           |          | 60'            |            | 78,            |     | 4    | "        | Steam & Elec                 |
| 476-477                 | 2          | "                            |              | 65'3'           |          | 60'3"          |            | 107,           |     | 4    | "        | "                            |
| 478 to 483.             | 6          | **                           |              | 64'1'           |          | 60'            |            | 110,           |     | 4    | "        | "                            |
| 484<br>485              | 1          | u                            |              | 63'1\\\ 64'5\\\ |          | 60'            |            | 71,            |     | 4 4  | 11       | - "                          |
| 486-487                 | 2          | 44                           |              | 64'53           |          | 60'            |            | 98,<br>94,     |     | 4    | "        |                              |
| 488-490                 | 3          | 11                           |              | 69'2"           |          | 65'3"          |            | 87,            |     | 4    | ·u       | "                            |
| 491–493                 | 3          | - "                          |              | 64'51           |          | 60,            |            | 101,           |     | 4    | "        | Steam & Elec                 |
|                         |            |                              |              |                 | 3909-000 | NGTH           |            | SEASON SERVICE |     |      | PLAT-    | HEAT AND                     |
|                         |            | Pinner.                      |              |                 | 202000   | GGAGE<br>OMPT. |            | MPT.           | WE  | IGHT | FORM     | LIGHT                        |
| 01 to 706               | 6          | Bag. & Mail                  |              |                 |          |                | 30         |                |     | ,700 | Blind    | Steam & Elec                 |
| 10                      | 1          | "                            | 58'          |                 | 23'      |                | 30'        | 1              |     | ,600 | "        | "                            |
| 11<br>12                | 1          | **                           | 58'6<br>58'6 | 11/1            | 20       |                | 30′<br>30′ |                |     | ,600 | "        | "                            |
| 13                      | 1          | "                            | 584          | 111             | 23       | 811            | 30'        | *              |     | ,100 |          | "                            |
| 15                      | i          | 66                           | 58"          |                 | 23'      | 7"             | 30'        | 2"             |     | ,800 | -        | u                            |
| 16                      | î          | - 66                         | 58'9         |                 |          |                | 30'        |                |     | 500  | - 44     | - 44                         |
| 18                      | î          | "                            | 53'9         |                 |          |                | 15'        | 1"             |     | ,100 | **       | **                           |
| 19                      | 1          | "                            | 53'9         |                 |          |                | 15'        |                |     | ,200 | "        | 41                           |
| 20                      | 1          | **                           | 53'9         | )"              | 33'      | 11"            | 15'        |                |     | ,100 | 44       |                              |
| 21                      | 1          | "                            | 61'3         |                 |          | 31"            | 15'        |                |     | ,400 | "        | 44                           |
| 22                      | 1          | "                            | 61'3         |                 | 41'      | 31"            | 15'        | 5"             |     | ,600 | ***      | **                           |
| 25                      | 1          | "                            | 64'9         |                 |          |                | 30'        |                |     | ,700 | "        | "                            |
| 26                      | 1          | "                            | 64'9         |                 |          |                | 30'        |                |     | ,100 | "        | "                            |
| 27<br>29 to 731         | 1 3        | "                            | 64'9         |                 |          |                | 30′<br>30′ |                |     | ,000 | "        | "                            |
|                         | V-Sto      |                              |              |                 | 333      | 10             | 30         |                | 117 | ,200 |          |                              |
|                         |            | Milk Train (<br>with Electri |              |                 |          |                |            |                |     |      | LITER SE |                              |

#### PASSENGER TRAIN CARS-Continued

|                | NO. |         | LENGTH           | INSIDE          |         | DIMENSIONS                 |                                       |
|----------------|-----|---------|------------------|-----------------|---------|----------------------------|---------------------------------------|
| NUMBERS        | OF  | KIND    | OVER             | LENGTH          | WEIGHT  | OF<br>SIDE DOORS           | PLATFORMS                             |
| -0.0           | 1   |         |                  |                 |         | CLUB DOORD                 |                                       |
| 800            | 1   | Milk    | 44'9"            | 41'1"           | 56,000  | 4'6"                       | Blind                                 |
| 801            | 1   | "       | 44'9"            | 41'1"           | 56,700  | 4'6''                      | "                                     |
| 802            | 1   | **      | 52'8"            | 49'             | 62,500  | 4'                         | 66                                    |
| 803            | 1   | 44      | 53'71"           | 49'             | 76,700  | 4'6"                       | ee                                    |
| 804            | 1   | 66      | 52'8"            | 49'             | 64,700  | 4'6"                       |                                       |
| 805            | ī   | **      | 53'73"           | 49'             | 71,000  | 4'                         | 66                                    |
| 806            | î   | ***     | 52'8"            | 49'             | 58,000  | 4'                         |                                       |
| 807-808-809    | 3   | **      | 53'71"           | 49'             | 71,400  | 4'6"                       | - 11                                  |
| 810-811        |     | **      | 52'8"            | 49'             | 62,400  | 4'6"                       | - 66                                  |
| 812-813        | 2 2 |         | 52'8"            | 49'             | 62,300  | 4'6"                       | - 16                                  |
| 814            | ĩ   |         | 52'8"            | 49'             | 63,800  | 4'6"                       |                                       |
| 015            | î   |         | 52'8"            |                 |         |                            | "                                     |
| 815<br>816-817 |     | **      |                  | 49'             | 63,000  | 4'6''                      | "                                     |
| 310-817        | 2   | 11      | 52'8"            | 49'             | 64,525  | 4'6''                      | "                                     |
| 818            | 1   | "       | 53'71"           | 49'             | 72,700  | 4'6"                       | 77                                    |
| 819-820-821    | 3   | "       | 53'71''          | 49'             | 76,600  | 4'6"                       | "                                     |
| 322            | 1   |         | 52'8"            | 49'             | 60,900  | 4'6"                       | "                                     |
| 323            | 1   | "       | 53'71"           | 49'             | 70,800  | 4'6"                       | 44                                    |
| 324            | 1   | "       | 52'8"            | 49'             | 63,100  | 4'6"                       | **                                    |
| 325            | 1   | "       | 53'7½"<br>53'7½" | 49'             | 70,900  | 4'6"                       | **                                    |
| 326            | 1   | ***     | 53'71"           | 49'             | 71,300  | 4'6"                       | - 44                                  |
| 327            | 1   | 11      | 52'8"            | 49'             | 62,400  | 4'6"                       | **                                    |
| 328            | î   | **      | 53'71"           | 49'             | 73,900  | 4'6"                       | **                                    |
| 829            | î   | 11      | 52'8"            | 49'             | 62,700  | 4'6"                       | **                                    |
| 330            | î   | 11      | 53'71"           | 49'             | 73,900  | 4'6"                       | - "                                   |
|                |     |         | 52'8"            |                 |         |                            | "                                     |
| 331            | 1 2 | 11      |                  | 49'             | 63,500  | 4'6''                      | "                                     |
| 832-833        |     |         | 52'8"            | 49'             | 65,400  | 4'6"                       | "                                     |
| 834-836        | 3   |         | 52'8"            | 49'             | 61,000  | 4'6''                      |                                       |
| 837            | 1   | 0.00    | 53'72"           | 49'             | 75,300  | 4'6''                      | **                                    |
| 838-839        | 2   | 11      | 52'8"            | 49'             | 64,300  | 4'6"                       |                                       |
| 840            | 1   | **      | 53'72"           | 49'             | 70,000  | 4'6''                      | "                                     |
| 841 to 845     | 5   | ee.     | 52'8"            | 49'             | 61,400  | 4'6"                       | 64                                    |
| 846            | 1   | ***     | 53'71"           | 49'             | 70,300  | 4'6"                       | 44                                    |
| 847            | 1   | "       | 53'71"           | 49'             | 74,200  | 4'6"                       | **                                    |
| 848-849        | 2   | . 66    | 52'8"            | 49'             | 63,600  | 4'6"                       |                                       |
| 850            | ĩ   |         | 53'71"           | 49'             | 72,900  | 4'6"                       | 11:                                   |
| 851 to 858     | 8   | **      | 52'8"            | 49'             | 64,800  | 4'6''                      | - 11                                  |
| 859            | 1   | u       | 53'71"           | 49'             | 72,900  | 4'6"                       | - 11                                  |
| 860-861        | 2   | 10      | 52'8"            |                 | 64,600  | 4'6"                       |                                       |
|                |     | "       | 52 8             | 49'             |         |                            | "                                     |
| 862 to 866     | 5   |         | 52'8"            | 49'             | 70,200  | 4'6"                       |                                       |
|                |     |         |                  | STATE-<br>ROOMS |         | PLATFORMS                  | HEAT AND                              |
|                |     |         |                  |                 |         | /1 Vestibule               | (Steam an                             |
| 100            | 1   | Private | 77'71/4"         | 2               | 158,000 | (1 Observ'n                | Electric                              |
| 200            | 1   | **      | 83'334"          | 3               | 160,500 | 1 Vestibule<br>1 Observ'n  | Steam an<br>Electric                  |
| 300            | 1   | u       | 84'11"           | 2               | 166,000 | 1 Vestibule<br>1 Observ'n  | Steam, Ga                             |
| 400            | . 1 | "       | 83'2"            | 2               | 171,700 | {1 Vestibule<br>1 Observ'n | Steam an<br>Baker Heate<br>and Elec.  |
| 500            | 1   | "       | 83"71"           | 2               | 178,300 | {1 Vestibule<br>1 Observ'n | Steam an<br>Baker Heate<br>and Electr |
| 652            | 1   | Pay     | 69'5"            |                 | 103,000 | Vestibule                  | Steam, Ga                             |

#### RECAPITULATION OF PASSENGER TRAIN CARS

## (December 1, 1929)

| Coaches. Passenger and Baggage. Parlor-Cafe. Dining. | 176<br>25<br>3<br>4 | Brought forward. Milk. Pay. Private. | 301<br>67<br>1<br>5 |
|--|---------------------|--------------------------------------|---------------------|
| Baggage and Mail                                     | 70<br>23<br>301     |                                      | 374                 |

# EQUIPMENT ASSIGNED TO COMPANY SERVICE

(December 1, 1929)

| KIND                                    | NO.<br>OF | SERIES                                     | CAPACITY IN<br>THOUSAND POUNDS |        |        |      |         |       |     |  |
|---|-----------|--|--------------------------------|--------|--------|------|---------|-------|-----|--|
|   | CARS      | NUMBERS                                    | 30                             | 40     | 50     | 60   | 80      | 85    | 10  |  |
| Air Compressor                          | 1         | 35049                                      |                                |        |        |      | 1       |       |     |  |
| Boarding                                | 180       | 34001 to 34399, inc.                       | 3                              | 12     | 92     | 73   |         |       |     |  |
| Cinder & Refuse                         | 49        | 33001 to 33880, inc.                       |                                |        |        | 12   | 37      |       |     |  |
| Crane, Steam Loco. (30 Ton)             | 1         | 35001                                      |                                |        |        |      |         |       |     |  |
| Crane, Steam Loco. (10 Ton)             | 1         | 35002                                      |                                |        |        |      |         |       |     |  |
| Crane, Steam Loco. (14 Ton)             | 1         | . 35003                                    |                                |        |        |      |         | 683   | 1.5 |  |
| Crane, Steam Loco. (10 Ton)             | 2         | 35004-35005                                |                                |        |        |      | 20.5    | 227   | 3.5 |  |
| Crane, Steam Loco. (20 Ton)             | 1         | 35006                                      |                                |        |        |      |         |       | 1.  |  |
| Crane, Burro—Gasoline                   | 2         | 35040, 35045                               |                                |        |        |      |         | 2     |     |  |
| Crane, Universal—Gasoline               | 3         | 35046, 35047, 35048                        |                                |        |        |      |         | 2     |     |  |
| Derrick, Steam—Bridge Dept              | 1         | 35025                                      |                                |        |        |      |         |       |     |  |
| Derrick, Steam—Track Dept               | 3         | 35026, 35027, 35028                        |                                |        |        |      |         |       |     |  |
| Derrick, Air—Car Dept                   | 2         | 35030, 35031                               |                                |        |        |      |         |       |     |  |
| Derrick, Hand—Water Dept                | 2 3       | 35035, 35037                               |                                |        |        |      |         |       |     |  |
| Ditcher                                 |           | 35014, 35015, 35016<br>32101 to 32150 inc. |                                |        | 110000 |      |         | 0     |     |  |
| Oump Cars (20 Yd.)                      | 50        |  | .00000                         |        | 10000  | ***  | ***     | 111   | 11  |  |
| Oump Cars (30 Yd.)                      | 10        | 32151-32160<br>1                           | • • •                          |        | 160500 |      |         |       | 1   |  |
| Dynamometer<br>Examination—Transp. Dept | 1         | 35211                                      |                                |        |        |      |         | ***   | 1   |  |
| Sxammation—Transp. Dept                 | r         | (36000 to 36002 inc. )                     |                                |        | . 1    |      | 1.0.1   |       |     |  |
|   |           | 36004, 36005, 36008,                       |                                |        |        |      |         |       |     |  |
|   |           | 36009,                                     |                                |        |        |      |         |       |     |  |
| Flangers                                | 22        | 36013, to 36019 inc.                       | 4                              | 4      | 2      | 12   |         |       | 100 |  |
|   |           | 36023 to 36028 inc.                        |                                |        |        |      |         |       |     |  |
|   |           | 36040 to 36042 inc.                        |                                |        |        |      |         |       | H   |  |
| Gas Transport                           | 1         | 35991                                      |                                |        |        | 1    |         |       | l.  |  |
| ~~~ ~~~~~p~~~~~~~~~~~~~~~~~~~~~~~~~~~~  | 7         | (31000, 31019 to)                          |                                |        | 1000   | 1.00 |         | 10000 |     |  |
|   |           | 31036; 31039, 31,040                       |                                |        |        |      |         |       |     |  |
| W 1 TH 4                                | 40        | 31078, 31080, 31085,                       |                                |        | 3      | 140  | 00      |       |     |  |
| Work Flat                               | 43        | 31088, 31092, 31093,                       | ***                            |        | 1      | 17   | 25      | 2     |     |  |
|   |           | 31101, 31110 to                            |                                | 1      |        |      |         |       |     |  |
|   |           | 31135                                      |                                |        |        |      |         |       |     |  |
| ce Transport Cars                       | 4         | 35283 to 35299                             |                                |        |        |      |         |       |     |  |
| cing Car                                | 1         | 35115                                      |                                |        |        |      |         |       |     |  |
| Instruction—Air Brake                   | 1         | 35200                                      |                                |        | 1      | 100  |         |       |     |  |
| Material—Stores Department              | 15        | (35154 to 35170, 35190)                    |                                |        | 1      | 4    | 10      |       |     |  |
|   | 2.0       | 35272-35273                                |                                | 7 20 2 | 1 6    | 1 2  | M. 1856 | 13.00 |     |  |
| Material—Maint. of Way Dept             | 15        | 35171 to 35187, inc.                       |                                |        |        |      |         | 1     |     |  |
| Material, Signal Dept                   | 3         | 35153, 35188, 35189                        |                                |        |        | 2    | 1       |       |     |  |
| Pay Car                                 | 2 2       | 35255, 35256                               |                                |        |        |      |         |       |     |  |
| Pile Drivers                            | 1         | 35019, 35020                               |                                |        |        |      |         |       |     |  |
| Roofers'                                | 1         | 35059                                      |                                | 1      |        |      |         | 1.11  | 1   |  |
|   | 424       |  |                                |        |        |      |         |       |     |  |

# RECAPITULATION OF EQUIPMENT ASSIGNED TO COMPANY SERVICE (December 1, 1929)

| Air Brake Instruction | Brought Forward384   |
|-----------------------|----------------------|
| Boarding              | Shop Service         |
| Cinder and Refuse     | Snow Plows           |
| Cranes                | Steam Shovels        |
| Derricks              | Supply 9             |
| Dump Cars (20 Yd.)    | Tool                 |
| Dump Cars (30 Yd.)    | Wreckers             |
| Flangers              | Miscellaneous        |
| Work, Flat            | Dynamometer Car #1 1 |
| Pile Drivers          |                      |
|                       | Total                |
| Carried Forward 384   |                      |

#### LOCOMOTIVE WATER SUPPLY STATIONS

Pennsylvania Division

|                 |                                     |     | TANKS                                |     |      | STAND PIPE                            |                           |         |
|-----------------|-------------------------------------|-----|--------------------------------------|-----|------|---------------------------------------|---------------------------|---------|
| STATION         | LOCATION ON<br>DIVISION             | NO. | CAPACITY                             | NO. | SIZE | TRACKS SERVED                         | SOURCE OF SUPPLY          | HOW     |
| Archbald        | Archbald Branch                     | 1   | 35,000                               | 2   | 10"  | Archbald Branch North<br>Bound Fourth | Olyphant Water Co         | Gravity |
| Carbondale Yard | Main Line and Yard                  | 4   | 50,000<br>50,000<br>50,000<br>35,000 | 6   | 10"  | Yard                                  | Consolidated Water Co     | ш       |
| Centre Village  | Maine Line                          | 1   | 50,000                               | 1   | 10"  | No. Bound Main                        | D. & H. Co. Spring        | **      |
| Forest City     | {Jefferson Division,}<br>Erie R. R} | 1   | 50,000                               | 2   | 10"  |                                       | Scranton Gas and Water    | a       |
| Green Ridge     | Main Line                           | 1   | 50,000                               | 1   | 10"  | Round House Tracks                    | Scranton Gas and Water Co | u       |

#### TANKS STAND PIPE LOCATION ON HOW STATION SOURCE OF SUPPLY DIVISION SUPPLIED TRACKS SERVED NO. CAPACITY NO. SIZE $\begin{array}{cccc} \text{Honesdale} & & & \text{Honesdale Branch} & \\ \text{Hathaway's Pond} & & & \text{Jefferson Division}, \\ \text{Erie R. R.} & & & & \end{array}$ Honesdale Water Co..... 35,000 10" Yard..... Gravity 1 N. and S. Bound Mains. 50,000 2 10" Hathaway's Pond..... Pump W. B. C. R. R. Yard S. Bound Track.... Run around Track... Hudson.... Main Line..... 50,000 3 10" Spring Brook Water Co. . Gravity Gravity 35,000 Gal. Tank, has spout to So. Bound Main Gravity Water Station 35,000 50,000 No. Bound Mains... (So. Bd. by Tank.) Lanesboro..... 1 10" Moosie..... Nineveh.... 1 50,000 $^{2}_{1}$ 10" 10" N. and S. Bound.... North Bound Main... Spring Brook Water Co. . Connected with Susq. Div Olyphant..... " 50,000 2 10" Tracks 3 and 4..... Olyphant Water Co.... Gravity Plymouth Junction... No. 3 Branch..... 50,000 1 10" Yard Track..... Spring Brook Water Co. .

50,000

50,000

50,000 35,000

50,000

2

1 10"

2 /10"

2

10"

10"

N. and S. Bound Mains,

N. and S. Bound Mains and Siding...... Main and Siding.....

Yard and Round House.

{Jefferson Division, Erie R. R. . . . . . } Honesdale Branch . . . .

Yard.....

Starrucca.....

Uniondale.....

Waymart.....

Wilkes-Barre.....

Pond and Creek, Star-

Gravity

Lewis Lake.....

Waymart Water Co....

Spring Brook Water Co.

LOCOMOTIVE WATER SUPPLY STATIONS—Continued
Pennsylvania Division—Continued

#### LOCOMOTIVE COALING STATIONS NO. OF POCKETS IN CAPACITY (EACH) TOTAL TONS TRACK CAPAC-STATION DIVISION KIND ITY (CARS) Wilkesbarre.... Pennsylvania Coaling Crane Green Ridge Carbondale Lanesboro 5 500 " Trestle 100 tons 15 Crane 155, 65, 15 and 15 tons Binghamton..... Susquehanna Mechanical 250 4 Chute and Platform Nineveh..... 1 100 tons 100 3 12 50 tons 600 150 Trestle 12 Platform $3\begin{cases} 2\\1\\3 \end{cases}$ . . . . . . 190 tons \*\* Delanson.... Mechanical 500 30 120 tons 4 tons Mohawk..... Trestle 12 Mechanicville..... Saratoga Crane 20 South Albany Colonie Shops. \*\* None Trestle None None 13 None 100 tons 80, 80 and 60 tons None 5 500 Saratoga.... Mechanical 3 220 6 North Creek Fort Edward Lake George None Coaling Crane Platform None None 5 6 2 bins 1 bin 100 13 tons Whitehall.... Saratoga & Champlain Mechanical 6 100 tons 358 80 tons Rutland<sup>®</sup>..... Saratoga Champlain .....2 2 100 Ticonderoga Port Henry Platform Port Henry. South Junction..... None Mechanical 250 tons 500 \*\* 20 $3\{2\\1$ 120 tons 42 tons Plattsburg.... Mechanical 282 4 Rouses Point... Lyon Mountain Lake Placid... Coaling Crane None \*\* ..... 12 2 4 " <sup>©</sup> Facilities furnished by Rutland R. R. \* Out of service.

In 1921, see above p. 709, there was a hand operated turntable, 60feet long, at Farview.

| LOCATION  | POWER BY WHICH OPERATED | LENGTE<br>(FEET) |
|---|-------------------------|------------------|
| Penr  | nsylvania Division      |                  |
| Jefferson Junction<br>Honesdale<br>Carbondale (2) | Hand                    | 75<br>65<br>105  |
| Green Ridge                                       | One—hand                | 65<br>65         |
| Whats-Darre                                       |                         | 65               |
| Susq  | uehanna Division        |                  |
| Cherry Valley                                     | Hand                    | 60               |
| Vineveh   | Electric                | 65<br>75         |
| Altamont  | Air                     | 90               |
| Delanson  | #                       | 65               |
| obleskill   | HandElectric            | 65<br>105        |
| Singhamton  | u                       | 90               |
| Iohawk  | "                       | 65               |
| Iechanicville                                     | - "                     | 100              |
| Sai   | ratoga Division         |                  |
| Colonie   | Electric                | 105              |
| Green Island                                      | Hand                    | 62               |
| North Creek                                       | "                       | 60               |
| Vhitehall   | Electric                | 65<br>75         |
| Rutland   | tOne—electric.          | 70               |
| Eagle Bridge                                      | Hand                    | 50               |
| Saratoga  | Electric                | 60               |
| Cha   | mplain Division         |                  |
| Rouses Point                                      | Air                     | 100              |
| Plattsburg  | Electric                | 65               |
| Ausable Forks                                     | Hand                    | 54               |
| ort Henry   | "                       | 65<br>65         |
| ake Placid  | Electric                | 100              |

#### ROUND HOUSES

| LOCATION  | NO. OF<br>STALLS         | LOCATION  | NO. OF                                 |
|---|--------------------------|---|--|
| Pennsylvania Division   |                          | Susquehanna Division  |  |
| Carbondale (New)  *Carbondale (Old).  Green Ridge.  Wilkes-Barre.  *Honesdale.  Saratoga Division | 41<br>10<br>12<br>9<br>5 | †Delanson Oneonta. Nineveh Binghamton Mohawk Cherry Valley †Cooperstown Mechanicville | 6<br>52<br>2<br>10<br>9<br>1<br>3<br>5 |
| #South Albany<br>Colonie<br>*Green Island<br>*Saratoga Springs                                    | 30<br>15<br>4            | Champlain Division  |  |
| Saratoga Springs. Fort Edward. Whitehall. Lake George. PRutland                                   | 25<br>1<br>17            | Port Henry. Rouses Point. ‡Plattsburg. Lake Placid.                                   | 2<br>7<br>10<br>2                      |

50

<sup>\*</sup> Not in use as round house.

# Five stalls rented for store house.

† One stall used as repair shop.

Facilities furnished by Rutland R. R.

## STOCK PENS

|                          | LOCATION       | NO.<br>OF<br>PENS                               | CAPA-<br>CITY<br>(IN<br>CARS) | DIMENSIONS<br>OF PENS<br>(FEET)   | FEEDING AND<br>WATERING<br>FACILITIES | SINGLE OR<br>DOUBLE<br>DECK<br>CHUTE |
|--------------------------|----------------|---|-------------------------------|-----------------------------------|---------------------------------------|--------------------------------------|
| Pennsylvania<br>Division | Windsor        | 2   | 6                             | 27x42<br>35x43                    | None                                  | Double                               |
| sylv                     | Carbondale     | 1   | 7                             | 40x90                             | Feed & Water                          | Single                               |
| Penn                     | Wilkes-Barre   | $\left\{\begin{array}{c}1\\1\end{array}\right.$ | 8 2                           | 40x68<br>24x45                    | Feed }                                | Double                               |
|                          | Central Bridge | 1   | 2                             | 28x37                             | None                                  | Single                               |
|                          | Cobleskill     | 4   | 8                             | 2-29x40<br>2-30x40                | "                                     | "                                    |
|                          | Richmondville  | 1   | 3                             | 22x40                             | None                                  | "                                    |
| п                        | East Worcester | 1   | 4                             | 27x32                             | "                                     | "                                    |
| Susquehanna Division     | Worcester      | 2   | 3                             | 20x48 Each<br> 24x36              | " "                                   | "                                    |
| Div                      | Schenevus      | 2   | 5                             | 30x37                             | 11                                    | 44                                   |
| na                       | Maryland       | 1   | 3                             | 38x40                             | "                                     | **                                   |
| han                      | Oneonta        | 2   | 5                             | 31x80<br>21x24                    | Feed & Water                          | " (2                                 |
| Jue                      | Otego          | 2   | 4                             | 32x40 Each                        | None<br>Water                         | " (2                                 |
| Sus                      | Wells Bridge   | 1   | 2                             | 26x32                             | None                                  | "                                    |
|                          | Unadilla       | 1   | 21/2                          | 20x64                             | Water                                 | "                                    |
| - 1                      | Sidney         | 1   | 2                             | 32x40<br>(24x39                   | None "                                | "                                    |
|                          | Bainbridge     | 2   | 4                             | 24x41                             | " }                                   | 1000                                 |
|                          | AftonNineveh   | 2 2   | 2 2                           | 18x57<br>32x48 Each               | Water                                 | "                                    |
| Valley                   | Cherry Valley  | 1   | 1                             | 26x41                             | None                                  | **                                   |
| -                        | Milford        | 1 1   | 4                             | 32x48<br>16x32                    | "                                     | 44                                   |
| C.<br>R.R.               | - Coopasson 2  |   |                               | 10302                             |                                       |                                      |
|                          | Green Island   | 8   | 16                            | 20x40 Each                        | Feed & Water                          | Double (4<br>Single (4               |
| 10 c                     | Mechanicville  | 1   | 41/2                          | 2700 S. F.                        | Water                                 | Double                               |
| Saratoga<br>Division     | Gansevoort     | 1<br>2<br>2                                     | 1<br>4<br>4                   | 16x20<br>28x30 Each<br>22x40 Each | None<br>Water<br>None                 | Single<br>Double                     |
|                          | Whitehall      | 5   | 16                            | {4-24x48 Each}<br>1-40x48         | Feed & Water                          | Double (4                            |
| George                   | Lake George    | 1   | 2                             | 38x38                             | None                                  | u                                    |

Car capacity of pens based on steers.

## STOCK PENS-Continued

|                        | LOCATION                 | NO.<br>OF<br>PENS | CAPA-<br>CITY<br>(IN<br>CARS) | DIMENSIONS<br>OF PENS<br>(FEET) | FEEDING AND<br>WATERING<br>FACILITIES | SINGLE OF<br>DOUBLE<br>DECK<br>CHUTE |
|------------------------|--------------------------|-------------------|-------------------------------|---------------------------------|---------------------------------------|--------------------------------------|
| Rut-<br>land<br>Branch | Fair Haven               | 2                 | 1                             | {16x20<br>20x24                 | None                                  | Double                               |
|                        | Middle Granville         | 2                 | 2                             | {12x19                          | None \                                | Double                               |
| )                      | Granville—2 Miles South. | 1                 | 2                             | 12x40<br>20x40                  | " }                                   | Double                               |
| Washington<br>Branch   | Rupert                   | 1                 | 1                             | 15x28                           | "                                     | "                                    |
| ngt                    |                          | ^                 | 1                             | (20x25                          | "                                     | "                                    |
| Bra                    | Salem                    | 3                 | 5                             | {21x46                          | "                                     | ee                                   |
| WE                     | S1 1                     |                   | 4.1                           | (9x70                           | "                                     |                                      |
|                        | Shushan                  | 1                 | 11/2                          | 15x44<br>(2-14x18               | " )                                   | Single                               |
|                        | Cambridge                | 3                 | 1                             | 1-26x32                         | " }                                   | Double (1                            |
|                        | Dresden                  | 1                 | 1                             | 14x22                           |                                       | Single                               |
|                        | Putnam                   | 1                 | 1                             | 15x32                           | "                                     | "                                    |
|                        | Wrights                  | 2                 | 2                             | 16x30<br>18x20                  | "                                     | 44                                   |
|                        | Fort Ticondonogo         | 2                 | 10                            | 45x68                           | "                                     | u                                    |
|                        | Fort Ticonderoga         | 2                 | 12                            | \34x68                          | "                                     | "                                    |
|                        | Crown Point              | 2                 | 5                             | 33x38                           | "                                     | Double                               |
| g<br>G                 | Westport                 | 1                 | 2                             | \\\\26x28<br>28x23              | "                                     |                                      |
| visio                  | Wadhams                  | 1                 | 2                             | 19x24                           | ii                                    | Single                               |
| Champlain Division     | Whallonsburg             | 2                 | 2                             | ∫15x35                          | "                                     | "                                    |
| ·ä.                    |                          |                   | 20000                         | \20x42                          | "                                     | "                                    |
| ald.                   | Essex                    | 1                 | $\frac{2^{\frac{1}{2}}}{2}$   | 29x39                           | "                                     | Double                               |
| 1811                   | Port Kent                | 1                 | 21                            | 19x44<br>30x37                  | u                                     | "                                    |
| 2                      | Beekmantown              | î                 | 1                             | 14x20                           |                                       | Single                               |
|                        | West Chazy               | 2                 | 4                             | ∫16x60                          | Water                                 | Double                               |
|                        |                          | -                 | *                             | 14x25                           |                                       | "                                    |
|                        | Chazy                    | 2                 | 8                             | 45x38<br>45x39                  | None                                  | "                                    |
|                        |                          |                   |                               | 51x63                           | Water & Feed                          | TC.                                  |
|                        | Rouses Point             | 3                 | 18                            | 41x63                           | 11                                    | " (1                                 |
|                        |                          |                   |                               | [50x70                          | "                                     | "                                    |
| eaugay                 | Cadyville                | 1                 | 1                             | 15x30                           | None                                  | Single                               |
| Ausable                | Peru                     | 1                 | 1                             | 16x24                           | None                                  | Single                               |

Car capacity of pens based on steers.

## TRACK SCALES

| LOCATION   | TONS  | LENGTH<br>(FEET) | ORDINARY OF DEAD RAIL |
|--|-------|------------------|-----------------------|
| Carbondale, Yard Office  | 125   | 50               | Dead Rail             |
| d Carbondale, Classification Yard  | 2-150 | 50               | "                     |
| #Green RidgeOlyphant (Tinsleys Crossing)   | 150   | 52               | 44                    |
| #Green Ridge   | 150   | 52               | ***                   |
| ( Parsons  | 125   | 52               | "                     |
| ਵੇਲੂੰ *Honesdale   | 100   | 42               | Ordinary              |
|  |       | 12               | 15 -5                 |
| ¶ (*Albany (Van Rensselaer Island)   | 100   | 42               | Dead rail             |
| Delanson, Dodge Plant  | 100   | 42               | "                     |
| Total Oneonta, Hump  | 150   | 52               | "                     |
| Oneonta, Fonda Ave   | 150   | 52               |                       |
| Binghamton   | 150   | 50               | Ordinary              |
| g ( Albany (North Albany)  | 125   | 50               | Ordinary              |
| Saratoga Springs   | 125   | 50               | "                     |
| EG Colonie   | 100   | 50               | Dead rail             |
| Albany (North Albany) Saratoga Springs Colonie Whitehall   | 150   | 58               | "                     |
| Signif Cambridge   | 150   | 58               | "                     |
| हैं हैं Green Island   | 150   | 58               | "                     |
| effective of the state of the s | 150   | 52               | 44                    |
| *West Rutland  | 100   | 42               |                       |
| *West Rutland. Center Rutland.   | 125   | 50               | Ordinary              |
| (Port Hanry (Witherhee Sharman Co.)  | 150   | 50               | Dead rail             |
| Bluff Point  | 150   | 50               | Ordinary              |
| Port Henry (Witherbee-Sherman Co.) Bluff Point   | 100   | 42               | Dead rail             |
| R ( I you Mountain /C O & I Co)  | 150   | 50               | Dead rail             |
| Lyon Mountain (C. O. & I. Co.)<br>Standish (C. O. & I. Co.)  | 150   | 50               | Dead rail             |
| boandish (C. O. & I. Co.)  | 100   | 00               |                       |

<sup>\*</sup> Not in service. # Temporarily removed.

## ICE HOUSES

|                          | STATIONS   | LOCATION   | CAPACITY (TONS                                |
|--------------------------|--|--|---|
| nis                      | Wilkes-Barre   | South of Yard Office   | 500   |
| lvar                     | Green Ridge  | Opposite Station   | 385   |
| Pennsylvania<br>Division | Carbondale   | Lower Yard   | 780<br>370                                    |
| Susquehanna              | Oneonta  | Milk Station.<br>  Round House<br>  Milk Station<br>  Near Station.<br>  Near Kenwood Yard | 4060<br>1000<br>3170<br>180<br>500            |
| Saratoga<br>Division     | Colonie Colonie (Storage Bin) Saratoga Springs Salem North Creek Lake George Whitehall Rutland | Shops. Shops. Near Station. Shops. Near Station. South of Station Round House Shops.       | 1525<br>90€<br>382₹<br>7≥<br>470<br>650<br>90 |
| plain<br>Div.            | Plattsburg<br>Lake Placid<br>Rouses Point (Storage Bin)  | Foot of Dock StreetOpposite StationRound House   | 841<br>330<br>1800                            |

#### WYES

| LOCATION  | (CARS) | LOCATION   | (CARS) |  |
|---|--------|--|--------|--|
| Pennsylvania Division   |        | Saratoga Division—Con.   |        |  |
| Plymouth Branch (Wilkes-Barre<br>Connecting R.R. Overcrossing). |        | †Green Island<br>†West Rutland<br>†Troy.   |        |  |
| Bushwick (Honesdale Br.)  | 1      | †Troy.<br>†Mechanicville.<br>Saratoga.<br>†Fort Edward.                          | 4      |  |
| Susquehanna Division.  Cooperstown Junction                     |        | ‡Fort Edward<br>Lake George (Balloon Track)<br>‡Whitehall<br>‡Greenwich Junction | 30     |  |
| Delanson  | 1      | ‡Castleton   |        |  |
| Saratoga Division.  |        | Champlain Division.  |        |  |
| Colonie (Shops)<br>Watervliet (W. I. Tower)                     | 16     | ‡Bluff Point   |        |  |

<sup>†</sup> Have no blind end.
\*\* Out of service.

#### SPECIAL FACILITIES FOR HANDLING FREIGHT

#### Cranes and Derricks

| STATION   | LOCATION  | CAPACITY IN TONS                                  |  |  |
|---|---|---|--|--|
| Albany (near Island Creek)<br>Albany (Madison Ave.)<br>Binghamton | On dock at new slip for boat transfer To Transfer from Cars to Teams Back from freight house yard | Derrick 2<br>Electric Crane 30<br>Gantry Crane 20 |  |  |
| Hudson  | Car Department Transfer Track   | Universal Gasolin<br>Crane 6                      |  |  |
| Hudson Falls  | Near freight house  | Pillar Crane 5                                    |  |  |
| Mechanicville   | Transfer Platform   | " 10<br>" 20                                      |  |  |
| Scranton (Wyoming Ave.)   | Team track north of freight house   | " 20  |  |  |
| Troy (Green Island)   | Near freight house  | Electric Crane 30                                 |  |  |
| Waterford<br>Wilkes-Barre   | North of freight house  | Gantry Crane 10<br>Pillar Crane 20                |  |  |

#### Coal Trestles

| Albany    | * For transfer of anthracite and bituminous coal and other similar bulk commodities from ears to boats. |
|-----------|---|
| Whitehall |   |

<sup>\*</sup> All shipments must be loaded in hopper bottom cars.

#### Wharves for Interchange of Traffic with Water Lines

| Albany (South Albany Yard) | Equipped for handling ages or in bulk. | general | merchandise | in | pack- |
|----------------------------|--|---------|-------------|----|-------|
|----------------------------|--|---------|-------------|----|-------|

#### Less Carload Freight Transfers

|  | NUMBER OF<br>PLATFORMS     | (NO. OF CARS)                           |
|--|----------------------------|---|
| Albany Binghamton Carbondale Mechanicville Oneonta Plattsburg Rouses Point             | 5<br>1<br>1<br>3<br>1<br>1 | 76<br>39<br>13<br>140<br>25<br>27<br>13 |
| Rutland. Scranton (Wyoming Ave.). Scranton (Lackawanna Ave.). Whitehall. Wilkes-Barre. | 1<br>1<br>1<br>2<br>1      | 35<br>12<br>20<br>20<br>79              |

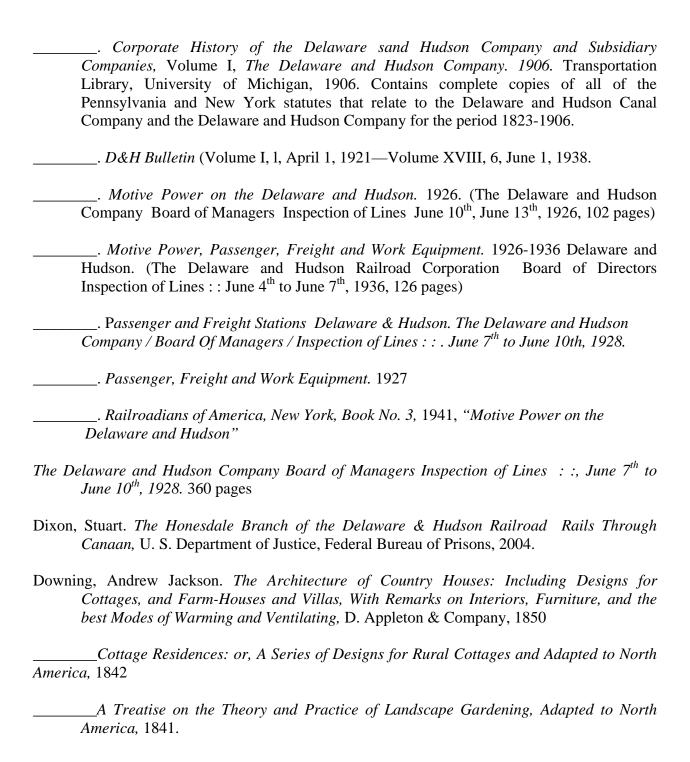
All of above also handle inbound and outbound city tonnage.

## Other Special Facilities.

| Albany                   | Slope to handle a                       | utomobiles   | , horses,  | etc.       |                      |
|--------------------------|---|--------------|------------|------------|----------------------|
| Archbald                 |   | и            | "          | u          |                      |
| Binghamton               |   |              | lling auto | mobiles,   | horses, etc., from   |
| Cambridge                | ends or sides of<br>Slope to handle a   |              | , horses,  | etc.       |                      |
| Carbondale               | " "                                     | "            | "          | "          |                      |
| Chazy                    | " "                                     |              |            | "          |                      |
| Cohoes                   |   |              |            |            |                      |
| Crown Point              | Slope to handle a                       | utomobiles   | , horses,  | etc.       |                      |
| ort Edward               | Block to handle l<br>Slope to handle a  |              |            | oto        |                      |
| Hens Falls               |   |              |            |            | nobiles, horses, etc |
| Honesdale                | Slope to handle a                       |              |            |            | ionice, norses, eve  |
| Hudson Falls             | ti ti                                   | 11           | , 1101505, | "          |                      |
| essup-Peckville          | Platform with slo                       | pe to handl  | e automo   | biles hor  | ses etc              |
| ake George               | Marine railway fe                       |              |            |            | been over            |
| ake Placid               | Slope to handle a                       | utomobiles   | horses.    | etc.       |                      |
| oon Lake                 | 11 11                                   | 11           | , 1101000, | 11         |                      |
| Mechanicville            | Three transfer pl                       | atforms.     |            |            |                      |
| Olyphant                 | Slope to handle a                       |              | s. horses. | etc        |                      |
| Oneonta                  | Platform with slo                       |              |            |            | ses. etc.            |
| Plattsburg               | Slope to handle a                       |              |            |            |                      |
| Plattsburg               | Slope to handle h                       |              |            |            | Paper Co.            |
| Port Henry               | Slope to handle a                       |              |            |            |                      |
| Round Lake               | -111                                    | "            | " "        | **         |                      |
| Rouses Point             | Slope to handle h                       | orses, etc.  |            |            |                      |
| Salem                    | Slope to handle a                       | utomobiles   | horses,    | etc.       |                      |
| Saranac Lake             | ii ii                                   | - "          | "          | "          |                      |
|                          | Two transfer plan                       | tforms for l | handling   | horses.    |                      |
| Baratoga Springs         | Slope to handle a                       |              |            |            |                      |
| Schenectady              | Slope to handle a                       |              |            | etc.       |                      |
| Scranton (Wyoming Ave.). |   | automobile   |            |            | d sunken track t     |
| Scranton (Lacka. Ave.)   | Slope to handle a                       | utomobiles   | s, horses, | etc.       |                      |
| Troy (Green Island)      | *************************************** | "            | "          | "          |                      |
| Valcour                  | Slope to handle a                       | utomobiles   | , horses,  | etc.       |                      |
| Warrensburg              | u u                                     |              |            | "          |                      |
| Waterford                | Slope to handle f                       | ire engines. | automol    | oiles, hor | ses, etc.            |
| West Pawlet              | Can handle autor                        |              |            |            |                      |
| Westport                 | Slope to handle a                       |              |            |            |                      |
| Whitehall                | Two transfer pla                        |              | S 15       |            |                      |
| Wilkes-Barre             | Slope to handle a                       |              | harman     | ata        |                      |

# The D&H Canal Company: Selected Bibliography

- Aurand, Jr., A. Monroe. *HISTORICAL ACCOUNT OF THE MOLLIE MAGUIRES Origin,* Depredation and Decay of a Terrorist Secret Organization in the Pennsylvania Coal Fields During and Following the Civil War, privately published in 1940 by The Aurand Press, Harrisburg, PA.
- Barber, David G. A Guide to the Delaware & Hudson Canal, 2003.
- Bathe, Greville and Dorothy Bathe. *Oliver Evans A Chronicle of Early American Engineering*. Published by The Historical Society of Pennsylvania, Philadelphia, 1935, 362 pages.
- Best, G. M. "The Gravity Railroad of the Delaware & Hudson Canal Company," *Railway & Locomotive Historical Society Bulletin* No. 82, April 1951, pp. 7-24.
- \_\_\_\_\_. Locomotives of Dickson Manufacturing Co. San Marino, CA, 1966.
- Brands, H. W. Andrew Jackson His Life and Times. Doubleday, 2005.
- Casey, Jr., Edward J. and Dorothy D. Jones. *A History of the Borough of Archbald Pennsylvania*, 1976.
- Carbondale newspapers in the archives of the Carbondale Historical Society, 1828-1902.
- Clark, J. A., The Wyoming Valley, Upper Waters of the Susquehanna, and the Lackawanna Coal-Region, including Views of the Natural Scenery of Northern Pennsylvania, from the Indian Occupancy to the Year 1875. (Scranton: J. A. Clark, publisher, 1875).
- Connolly, Mary Theresa. "T. C." *The Gravity History of The Pennsylvania Coal Company Railroad 1850-1885*, 1972.
- Delaware and Hudson Canal Company. (1) Record of Deeds. New York to D. &. H. C. Co., Providence, PA (2) Record of Deeds. Pennsylvania (Wayne, Pike and Susquehanna Counties) to D. & H. C. Co and others, Providence, PA (3) Record of Deeds. Pennsylvania. Luzerne County to D. & H. C. Co. and others, Providence, PA. These three deed volumes are in the archives of the Carbondale D&H Transportation Museum, Carbondale, PA.
- Delaware and Hudson Company. A Century of Progress / History of The Delaware and Hudson Company / 1823-1923. (Albany: J. B. Lyon Company, Printers, 1925)



- Durfee, J. R. Reminiscences of Carbondale, Dundaff and Providence, Forty Years Past. Philadelphia. 1875.
- Evans, Harold, with Gail Buckland and David Lefer. They *Made America From the Steam Engine to the Search Engine: Two Centuries of Innovators*. Back Bay Books, 2004.
- Ferguson, Eugene S. *Oliver Evans Inventive Genius of the American Industrial Revolution*. The Hagley Museum, Greenville, DE. 1980
- FitzSimons, Neal. The Reminiscences of John B. Jervis, Syracuse University, 1971
- Folsom, Jr., Burton W. Urban Capitalists Entrepreneurs and City Growth in Pennsylvania's Lackawanna and Lehigh Regions, 1800-1920. The Johns Hopkins University Press, 1981.
- Hartmann, Edward George, Americans from Wales (New York, 1883).
- Henretta, James A. *The Evolution of American Society, 1700-1815. An Interdisciplinary Analysis.* (D. C. Heath and Company, Lexington, MA, 1973)
- History of Luzerne Lackawanna and Wyoming Counties, PA. with Illustrations and Biographical Sketches of Some of Their Prominent Man and Pioneers. (New York: Munsell & Co., 1880).
- Hitchcock, Frederick L., and John P. Downs. *History of Scranton and the Boroughs of Lackawanna County*, Volume II, 1914.
- Hollister, H., M.D., *History of the Lackawanna Valley*. Fifth Edition. Philadelphia, 1885.
- \_\_\_\_\_. History of the Delaware and Hudson Canal Company. 1880. Unpublished typescript in the collection of the D. & H. Canal Historical Society and Museum, High Falls, NY.
- Hudson Coal Company. The Story of Anthracite. New York, 1932.
- Le Roy, Edwin. *The Delaware and Hudson Canal: A History*. (Honesdale, PA: Wayne County Historical Society, 1950, 1980).
- \_\_\_\_\_. *The Delaware & Hudson Canal and its Gravity Railroads*. (Honesdale, PA: Wayne County Historical Society, 6<sup>th</sup> printing, 1980).
- Leslie, Vernon. Honesdale: The Early Years. Honesdale, 1981.
- \_\_\_\_\_. Honesdale and the Stourbridge Lion. Honesdale, 1979.

- Logan, Samuel C., The Life of Thomas Dickson. Scranton, 1888.
- Lowenthal, Larry. From the Coalfields to the Hudson: A History of the Delaware and Hudson Canal. (Fleischmanns, New York: Purple Mountain Press, 1997).
- Mathews, Alfred. History of Wayne, Pike and Monroe Counties, Pennsylvania, 1886
- Miller, Donald L. and Richard E. Sharpless. *The Kingdom of Coal / Work, Enterprise, and Ethnic Communities in the Mine Fields.* (Philadelphia, PA; University of Pennsylvania Press, 1985).
- Murphy, Thomas. Jubilee History of Lackawanna County, Pennsylvania, Volume One, 1928
- Nye, Russel Blaine. Society and Culture in America 1830-1860.
- National Cyclopedia of American Biography Being the History of the United States as Illustrated in the Lives of the Founders, and Defenders of the Republic, and of the Men and Women who are Doing the Work and Moulding the Thought of the Present Time. Edited by Distinguished Biographers, Selected from each state. Revised by the most Eminent Historians, Scholars and Statesmen of the Day. (Jones, Samuel Sheldon, pp. 295-296). Volume XXII (New York: James T. White & Company, 1932.
- Osterberg, Matthew M. *The Delaware & Hudson Canal and The Gravity Railroad*. Images of America, 2002.
- Pennsylvania A History. George P. Donehoo, Editor-in-Chief. With Introduction by Thomas L. Montgomery. (Lewis Historical Publishing Company, Inc., New York, 1926) (Samuel Sheldon Jones, pp. 235-236)
- Portrait and Biographical Record of Lackawanna County, Pennsylvania, PA. Containing Portraits and Biographical Sketches of Prominent and Representative Citizens of the County. Together with Biographies and Portraits of All the Presidents of the U. S. (New York and Chicago: Chapman Publishing Co 1897). (PABRLCP) (Jones, Samuel Sheldon, pp. 266-268)
- Proceedings of the Canal History and Technology Symposium. Volume I, January 30, 1982. Published by the Center for Canal History and Technology, Easton, PA, 1982. ("Ellet and Roebling" by Donald Sayenga, pp. 114-154; "The Pennsylvania Coal Company's Gravity Railroad" by Dr. Edward Steers, pp. 155-221)

- Volume II, March 26, 1983. 982. Published by the Center for Canal History and Technology, Easton, PA, 1983. ("The Delaware and Hudson Canal Company's Gravity Railroad" by Dr. Edward Steers, pp. 129-203)

  Volume III, 1984. Published by the Center for Canal History and Technology, Easton,
- PA, 1984. ("A Historical Survey of the Erie and Wyoming Valley Railroad")
- Volume XI, 1992. Published by the Center for Canal History and Technology, Easton, PA, 1992. ("Delaware & Hudson Company vs. Pennsylvania Coal Company during the 1850s" by Spiro G. Patton)
- Rashleigh, Alice V. Carbondale, My Carbondale. A History of the Pioneer City, 1951
- Roberts, Ellis W. The Breaker Whistle Blows. Mining Disasters and Labor Relations in the Anthracite Region. Anthracite Museum Press, Scranton, PA 1984.
- Ruth, Philip. Of Pulleys and Ropes and Gear, The Gravity Railroads of The Delaware and Hudson Canal Company and The Pennsylvania Coal Company (Wayne County Historical Society, Honesdale, 1997).
- Sanderson, Dorothy Hurlbut. The Delaware & Hudson Canalway / Carrying Coals To Rondout, 1965
- Sayenga, Donald. The Birth and Evolution of the American Wire Rope Industry, 1980
- \_\_\_\_\_Ellet and Roebling, 1983
- Scientific American Supplement, Vol. XXIV, No. 620, November 18, 1997: "Oliver Evans and the Steam Engine"
- Shaughnessy, Jim. Delaware & Hudson / The History of an Important Railroad Whose Antecedent Was a Canal Network to Transport Coal. (Berkeley, CA: Howell-North Books, 1982).
- Supreme Court, Ulster County. The President, Managers and Company of the Delaware and Hudson Canal Company vs. The Pennsylvania Coal Company: Pleadings and Testimony taken before J. H. Dubois, Referee. New York, 1858.
- Throop, Benjamin H. A Half Century in Scranton. Scranton, PA, 1895
- Upper Lackawanna Watershed Conservation Management Plan, Final Report, January, 2002.

- Wakefield, Manville B. Coal Boats to Tidewater The Story of the Delaware and Hudson Canal (South Fallsburg, NY: Steingart Associates, 1965).
- Wayne County Historical Society Newsletter, July-August-September 2012 issue.
- Whiting, Charles W. "An American Gravity Railroad," *Cassier's Magazine*, Volume 8. No. 2, 1895.

#### **MAPS**

- Atlas of the City of Scranton and Borough of Dunmore, published by L. J. Richards & Co., Philadelphia, PA 1888; also 1899 edition; also 1918 edition by Volk & Kuhls.
- Baist, G. W. Atlas of Wyoming and Lackawanna Valleys Luzerne and Lackawanna Counties, Pennsylvania, Philadelphia, 1894.
- Beers, D. G. Atlas of Luzerne County, Pennsylvania. From actual Surveys by and under the direction of D. G. Beers. (Published by A. Pomeroy & Co., Philadelphia, 1873).
- Carbondale Including Simpson and Whites Crossing, Lackawanna County, Pennsylvania. (Sanborn Map Co., New York, April 1930).
- City Atlas of Scranton, Pennsylvania. (G. M. Hopkins, C. E., Philadelphia, 1877).
- City of Scranton and Borough of Dunmore, Pennsylvania, 1898.
- Delaware and Hudson Canal Company. *Gravity Railroad / Carbondale to Honesdale*, 1895. Maps drawn by W. E. Anderson. Carbondale D. & H. Transportation Museum, Carbondale, PA.
- \_\_\_\_\_Map volume: Delaware & Hudson Company's Railroad, Honesdale Branch, Carbondale to Honesdale. March 1901. Maps drawn by W. E. Anderson.
- Sanborn Map Company's Insurance Map of Scranton, Pennsylvania. April 1884 edition; also Volume III, 1956.
- Scranton Pennsylvania, including Dunmore. Sanborn-Perris Map Co., NYC, NY, 1898.
- Tappan, George William . Map of the City of Carbondale, Lackawanna County, Pennsylvania. From Actual Surveys By and Under the Direction of George William Tappan. (Scranton, PA, October 18, 1909)

# **AUDIO CASETTE**

\_\_\_\_\_. *The Carbondale Mine Fire*. Commentary on the West Side Mine Fire from Dominick Andidora, Skip Race, John Barbaro, Jack Gillen, Tom Toolan, Attorney Robert Martin, Mayor Fred Mancuso, and Joe Fortuner. Audio tape in the holdings of the Carbondale D&H Transportation Museum.